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Symposium Integrated IVR 2.2

Upissue Guide

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Symposium Integrated IVR 2.2
Upissue Guide

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Overview

Introduction

Symposium Integrated IVR Release 2.2 (ISIVR 2.2) is an upissue of the Meridian IVR 1.x and Meridian IVR 2.x systems.

The *Symposium Integrated IVR 2.2 Upissue Guide* only provides details about the new and modified features in the ISIVR 2.2 system. You must use it in conjunction with the existing Meridian IVR 2.0/I documentation. If you cannot find an answer to your question in this guide, please refer to the existing Meridian IVR 2.0/I documentation. You can find a list of the existing documentation in "Required documentation" on page 1-9.

Assumptions

This guide assumes that you are familiar with Meridian IVR 1.x or Meridian IVR 2.x.

References

Meridian IVR 1.x refers to Meridian IVR Release 1.13 or Release 1.26.

Meridian IVR 2.x refers to Meridian IVR Release 2.08.

Procedures at a glance

Introduction

This section provides a high-level overview of the steps you must follow to

- migrate from Meridian IVR 1.x to ISIVR 2.2
- upgrade from Meridian 2.x to ISIVR 2.2

Migrate from 1.x to 2.2

This table provides a high-level overview of the steps you must follow to migrate from Meridian 1.x to ISIVR 2.2.

To do this	Follow these steps	For more information
Prepare for installation	• Contact the VAD for information regarding updated applications on the runtime or development system. • Verify that your version of Meridian Mail is Y2K compliant. • Unpackage the system and verify the checklist. • Perform a full backup of the existing 1.x system. • Use the System Configuration Management window to note the node and channel configuration.	"Preparing for 1.x to 2.2 migration" on page 2-8
Migrate the hardware	• Install the hard drive. • Connect the PORTS module to the PC/Xem card.	"Migrating from 1.x to 2.2" on page 3-7

To do this	Follow these steps	For more information
Migrate the software	• Configure the LAN IP address. • Activate the Host Connectivity option, if applicable. • Enable tty2A for the modem port.	"Migrating from Release 1.x to 2.2" on page 4-5
Transfer and convert files	• Transfer the applications to the ISIVR 2.2 system. • Convert the applications to ISIVR 2.2.	"Transferring from 1.x using FTP" on page 7-5 "Converting the files for ISIVR 2.2" on page 7-11
Back up and restore files	• Perform a full system backup using the ibr tool.	"Performing a full system backup" on page 8-3

Upgrade from 2.x to 2.2

This table provides a high-level overview of the steps you must follow to upgrade from Meridian 2.x to ISIVR 2.2.

To do this	Follow these steps	For more information
Prepare for installation	• Contact the VAD for information regarding updated applications on the runtime or development system. • Perform a full backup of the existing Meridian IVR 2.x system. • Perform a selected backup of files for upgrade to ISIVR 2.2. • Unpackage the system and verify the checklist. • Verify that your version of Meridian Mail is Y2K compliant. • Verify the existing keycode and serial number. • Back up the Express database, if applicable.	"Preparing for 2.x to 2.2 upgrade" on page 2-9
Upgrade the hardware	• Install the CD-ROM. • Install the hard drive. • Install the memory. • Install additional hardware, if applicable. • Verify the keylock and cable.	"Upgrading from 2.x to 2.2" on page 3-8

To do this	Follow these steps	For more information
Upgrade the software	• Verify the BIOS. • Upgrade the SCU. • Configure the second PC/Xe, if applicable. • Configure the LAN IP address. • Restore the Express database, if applicable. • Activate the Host Connectivity, if applicable. • Enable tty2A for the modem port.	"Upgrading from Release 2.x to 2.2" on page 4-7
Transfer and convert files	• Use the xbup tool to restore selected Meridian IVR 2.x files. • Convert the applications to ISIVR 2.2.	"Transferring from 2.x using xbup" on page 7-6 "Converting the files for ISIVR 2.2" on page 7-11
Back up and restore files	• Perform a full system backup using the ibr tool.	"Performing a full system backup" on page 8-3

Inside this guide

Describing the chapters

The *Symposium Integrated IVR 2.2 Upissue Guide* is structured as follows:

Chapter 1, "What's new in ISIVR 2.2," describes the new features in ISIVR 2.2. It also describes the modifications that make the product Y2K compliant. Finally, this chapter lists the documentation manuals you should use with ISIVR 2.2.

Chapter 2, "Preparing for installation," describes the steps to follow before you install the system. It also provides a checklist of the components that you should receive from the factory.

Chapter 3, "Upgrading the hardware," describes the procedures to upgrade the hardware.

Chapter 4, "Upgrading the software," describes the procedures to upgrade the software.

Chapter 5, "Expanding and replacing components," describes how to expand your ISIVR 2.2 system.

Chapter 6, "Installing or reinstalling new software," describes how to install the ISIVR 2.2 software from the original media.

Chapter 7, "Transferring and converting files," describes how to transfer and convert the Meridian IVR 1.x or Meridian IVR 2.x application files to ISIVR 2.2.

Chapter 8, "Backing up and restoring files," describes how to back up and restore your files.

Chapter 9, "Performing card diagnostics," describes the procedures to test your LAN cards.

Chapter 10, "Using the Uninterruptible Power Supply option," describes how to use the UPS option to prevent power fluctuations from interfering with the normal operation of the ISIVR 2.2 system.

Chapter 11, "Miscellaneous information," describes the changes that have been made to the Meridian IVR 2.x documentation since it was last published.

The **Index** provides the index entries in this guide.

Chapter 1

What's new in ISIVR 2.2

In this preface

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Overview

Introduction

This section lists the new and modified features in ISIVR 2.2.

Describing the ISIVR 2.2 features

Introduction

If you are upgrading from Meridian IVR 1.x, your software and almost all of your hardware is installed at the factory.

If you are upgrading from Meridian IVR 2.x, the ISIVR 2.2 software is installed at the factory. However, you must install the hardware at your site.

For both the Meridian IVR 1.x and Meridian 2.x, you must configure the ISIVR 2.2 software when the system arrives at your site.

List of features

This table lists the new features in ISIVR 2.2.

Features	For more information, refer to
Support for the Year 2000	"Support for the Year 2000" on page 1-5
Seagate Barracuda ST34573WC Ultra-wide SCSI 4.5 Gbyte hard drive	"Installing the hard drive" on page 3-24
TEAC CD-532S 32x SCSI CD-ROM drive	"Installing the CD-ROM drive" on page 3-17
3COM EtherLink XL PCI network card (optional)	"Installing the Ethernet card" on page 3-29
16-port Digiboard PC/Xem serial port card (optional)	"Installing the PC/Xem card" on page 3-31
Minimum base system memory of 64 Mbytes of RAM	"Upgrading the SIMMS" on page 3-27
Upgraded applications	Chapter 4, "Upgrading the software"
SCO UNIX 3.2 version 5.04c operating system	"Installing the operating system" on page 6-9

Features	For more information, refer to
Backup and restore procedures	Chapter 8, "Backing up and restoring files"
Report Writer modifications	"Report Writer modifications" on page 1-8

Support for the Year 2000

Introduction

ISIVR 2.2 is Year 2000 compliant. Some of the Y2K features are transparent, while others are not.

Changes to Fax Response

The transparent modifications are found in the FAX Response feature. Some of these modifications are described in "Fax Response modifications" on page 1-6.

Updated fax drivers

The following drivers are also updated for Y2K compliance: Apertus, Fax, UPS, serial card, ZYNX Ethernet card, and the Madge Token Ring.

Fax Response modifications

Introduction

Modifications have been made to the Fax Response feature to make it Y2K compliant.

Among the changes, a new fax driver is provided to allow ISIVR 2.2 to work with its new operating system. Changes have also been made to the Transit Terminal Identification (TTI) line and the Log/OM reporting dates.

VFX/40E fax board and driver

The ISIVR 2.2 Fax Response requires the VFX/40E fax board and a fax driver for the SCO UNIX (release 3.2, version 5.0.4c) operating system. The fax driver is automatically installed with the ISIVR 2.2 software.

Modifying TTI line information

For Y2K compliance purposes, the year format of the TTI line has been modified. A TTI line allows you to add a line of text to a fax page. This line includes the company's name and phone number, the number of pages in the fax, the date, and so on.

Through the Application Editor, you can also insert the current year into the TTI string using special formatting keywords.

This table shows the formats to use to display the current year.

To display a	For example	Type
four-digit year	1999 or 2003	%Y
two-digit year	00 for 2000 or 03 for 2003	%y
combination of the year, date, and month	1999 29 09	%f* (where * is an integer between 1 and 9)

For more information on TTI lines, refer to the *Meridian IVR Application Development Guide* (NTP 555-9001-310), Chapter 4, "Developing a fax application," "TTI line" section, page 4-53.

Modifying the Log/OM reporting dates

For Y2K compliance purposes, the year format of the dates in the Log/OM Reporting window has been modified.

The Log/OM Reporting window provides access to all of the logs generated by the fax system in the last seven days, as well as to the call traffic logs.

You can specify the time range during which logs should be displayed. The format for specifying this start/stop time range now appears as yyyy/mm/dd hh:mm.

The time stamp associated with the log entries also displays a four-digit year to make it Y2K compliant.

For more information on the Log/OM Reporting window, refer to the *Meridian IVR Fax Application Guide* (NTP 555-9001-350), Chapter 5, "Administering your system," "Creating system reports" section, page 5-25.

Report Writer modifications

Introduction

The Report Writer, a feature used to create system reports, is modified in ISIVR 2.2.

The feature is now part of the base product. It no longer requires a separate installation procedure, as it did in Meridian IVR 2.x.

For more information on this feature, refer to the *Meridian IVR System Administration Guide* (NTP 555-9001-300), Chapter 5, "Running reports."

Required documentation

Introduction

This section lists the documentation you need to run ISIVR 2.2.

Collecting the documentation

The *Symposium Integrated Upissue Guide* describes only the features applicable to ISIVR 2.2. You should also have the following manuals:

- *Product Guide* (NTP 555-9001-010)
- *Planning and Engineering Guide* (NTP 555-9001-200)
- *Installation Guide* (NTP 555-9001-210)
- *System Administration Guide* (NTP 555-9001-300)
- *Getting Started Guide* (NTP 555-9001-302)
- *Application Development Guide* (NTP 555-9001-310)
- *Meridian IVR 3270 Gateway Development Guide* (NTP 555-9001-312)
- *Meridian IVR SQL Server Guide* (NTP 555-9001-314)
- *Meridian IVR VT100 Gateway Development Guide* (NTP 555-9001-316)
- *Meridian IVR 5250 Gateway Development Guide* (NTP 555-9001-318)
- *Fax Application Guide* (NTP 555-9001-350)
- *Maintenance and Diagnostics Guide* (NTP 555-9001-500)

Chapter 2

Preparing for installation

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Preparing for 2.x to 2.2 upgrade	2-9

Overview

Introduction

Before you upgrade your hardware and software, you must complete the preinstallation procedures described in this chapter.

Using the checklists

Introduction

After your ISIVR 2.2 system arrives from the factory, you should double-check that you have received all of the necessary components.

Before you begin

Before you unpackage the components, you should know the following:

- To migrate or upgrade your software, you must supply your own MS-DOS (Version 6.22 or higher) boot disk.
- The Symposium Integrated IVR 2.2 Release Supplement CD is included in your package only if your system requires software fixes. The readme file in the CD's root directory provides installation instructions. This file also provides pointers to the help files relating to the automated patch installation tool. For more information on how to install the patch installation tool, refer to "Installing the PEPs" on page 6-23.

Packaging checklist for 1.x to 2.2 upgrade: development system

This table lists the components that are packaged with a development system, if you are upgrading from Meridian IVR 1.x to ISIVR 2.2.

Check (✔)	Hardware
	• Base System • 64 Mbytes of RAM • Serial Card - 16 Async Ports - Base Card • Serial Card - 16 Async Ports - Expansion Module • Tape Drive • CD-ROM Drive • 17-inch Monitor • 101 Key Enhanced Keyboard • Three-button Mouse • 33.6 Kbps External Modem • Modem Cable • Keylock Adapter • Keylock Cable • Seagate Barracuda ST34573WC Ultra-wide SCSI 4.5 Gbyte Hard Drive • Mounting Screws for Hard Drive (12) • 2.5 Gbyte Data Cartridge

Packaging checklist for 1.x to 2.2 upgrade: development system

Check (✔)	Software
	• Symposium Integrated IVR 2.2 OS & Application CD 1/1 • Symposium Integrated IVR 2.2 Boot Diskette 1/1 - CD Installation/Tape Recovery • Symposium Integrated IVR 2.2 Root Diskette 1/1 - CD Installation/Tape Recovery • Symposium Integrated IVR 2.2 BIOS 1.00.17 Update Diskette • Symposium OPEN IVR 4.0/Integrated IVR 2.2 System Configuration Utility Version 3.40 Overlay 1.03 for R2 AP, MRS/AP • Symposium Integrated IVR 2.2 System Voice Prompts Tape • Symposium Integrated IVR 2.2 Release Supplement CD (only supplied if patches are required)
Check (✔)	**Documentation**
	• *Symposium Integrated IVR 2.2 Upissue Guide* (NTP 555-9001-100) • *Symposium Integrated IVR 2.2 Planning and Engineering Guide* (NTP 555-9001-200) • IVR Development Documentation Package (2.08) • IVR Operational Documentation Package (2.08)

Packaging checklist for 2.x to 2.2 upgrade

This table lists the components that are packaged with a runtime system or a development system, if you are upgrading from Meridian IVR 2.x to ISIVR 2.2.

Check (✔)	Hardware
	• 2 x 16 Mbytes of RAM (a total of 32 Mbytes are supplied for a runtime system) • 16 Mbytes of RAM (supplied only for a development system) • Seagate Barracuda ST34573WC Ultra-wide SCSI 4.5 Gbyte Hard Drive • Mounting Screw for Hard Drive (12) • CD-ROM Drive • Peripheral Mounting Rails (2) • Drive Mounting Screw for CD-ROM (12) • 2.5 Gbyte Data Cartridge
Check (✔)	**Software**
	• Symposium Integrated IVR 2.2 OS & Application CD 1/1 • Symposium Integrated IVR 2.2 Boot Diskette 1/1 - CD Installation/Tape Recovery • Symposium Integrated IVR 2.2 Root Diskette 1/1 - CD Installation/Tape Recovery • Symposium Integrated IVR 2.2 BIOS 1.00.17 Update Diskette • OPEN IVR 4.0 System Configuration Utility Version 3.40 Overlay 1.03 for R2 AP, MRS/AP • Symposium Integrated IVR 2.2 System Voice Prompts Tape • Symposium Integrated IVR 2.2 Release Supplement CD (only supplied if patches are required)

Packaging checklist for 2.x to 2.2 upgrade

Check (✔)	Documentation
	• *Symposium Integrated IVR 2.2 Upissue Guide* (NTP 555-9001-100) • *Symposium Integrated IVR 2.2 Planning and Engineering Guide* (NTP 555-9001-200) • SCO OpenServer 5 Development Option License certificate (available only with a development system)

Preparing for 1.x to 2.2 migration

Introduction

This section describes the steps required to prepare to migrate your hardware from Meridian IVR 1.x to ISIVR 2.2.

Preparing for migration

To prepare to migrate your hardware from Meridian IVR 1.x to ISIVR 2.2, follow these steps.

Step	Action
1	Unpackage the system and verify that you have all the required components. ***Note:*** To verify that you have the required components, use the checklist provided in "Packaging checklist for 1.x to 2.2 upgrade: development system" on page 2-4.
2	Install a blank tape in your Meridian IVR 1.x system.
3	Log in as **root** with a password of **root1**
4	At the # prompt, perform a full system backup of the Meridian 1.x system by typing **find / -depth -print |cpio -ocvB -O /dev/rct0** ***Note:*** The symbol before "cpio" is the vertical slash (|).
5	Use the System Configuration Management window to note how the node and channels are configured. ***Note:*** For more information on the window, refer to the *Meridian IVR System Administration Guide* (NTP 555-9001-300), Chapter 1, "System configuration."
6	After the backup is finished, remove the backup tape and label it with a name and date.
7	To continue with the upgrade procedure, go to "Migrating from 1.x to 2.2" on page 3-7.

Preparing for 2.x to 2.2 upgrade

Introduction

This section describes the steps required to prepare to upgrade your hardware from Meridian IVR 2.x to ISIVR 2.2.

Preparing for migration

To prepare to upgrade your hardware from Meridian IVR 2.x to ISIVR 2.2, follow these steps.

Step	Action
1	If you have a runtime system, contact your VAD and confirm that your applications have been upgraded.
2	If you have a development system, contact your VAD to check on whether any further changes are required.
3	Insert a blank tape in your Meridian IVR 2.x system.
4	Log in as **root** with a password of **root1**
5	At the # prompt, perform a full system backup of the Meridian IVR 2.x system by typing **find / -depth -print |cpio -ocvB -O /dev/rct0** ***Note:*** The symbol before "cpio" is the vertical slash (|).
6	After the backup is finished, remove the backup tape and label it with a name and date.
7	Use the xbup tool to perform a selected backup of the files. ***Note:*** For more information, follow the procedure described in "Using the xbup tool" on page 2-11.
8	Print a System Configuration Management report to note the configuration of the ports. ***Note:*** For more information, refer to the *Meridian IVR System Administration Guide* (NTP 555-9001-300), Chapter 5, "Running reports."

Step	Action
9	Use the System Configuration Management window to note how the node and channels are configured. ***Note:*** For more information on the window, refer to the *Meridian IVR System Administration Guide* (NTP 555-9001-300), Chapter 1, "System configuration."
10	Back up the Express database, if applicable. ***Note:*** For more information, refer to "Backing up Express" on page 4-38.
11	If you have the Fax Response feature on your Meridian IVR 2.x system, use it to note the system parameters and modem configurations. ***Note:*** For more information, refer to the *Meridian IVR Fax Application Guide* (NTP 555-9001-350), Chapter 5, "Administering your system."
12	Unpackage the system and verify that you have all the required components. ***Note:*** To verify that you have the required components, use the checklist provided in "Packaging checklist for 2.x to 2.2 upgrade" on page 2-6.
13	Verify that your version of Meridian Mail is Y2K compliant. ***Note:*** For more information, contact your Nortel Networks service representative.
14	Verify the existing keycode and serial number by typing the following at the # prompt: **cd /usr/options** **cat .mivr_profile** ***Note:*** Write down the existing keycodes and serial number when the information appears on the screen.
15	To continue with the upgrade procedure, go to "Upgrading from 2.x to 2.2" on page 3-8.

Using the xbup tool

To use the xbup tool to perform a selected backup of the files, follow these steps.

Step	Action
1	Insert a blank tape in your Meridian IVR 2.x system.
2	Log in as **root** with a password of **root1**
3	At the # prompt, type **cd /u/ivr/tools**
4	At the # prompt, type **./xbup** ***Note:*** Be certain to type a period (.) before the "/". ***Result:*** The Backup Tool Window appears.
5	From the Backup Tool Window, select Backup.
6	To create a customized backup list, go to the *Selection* field and type **/u/ivr/backup/backup_mivr.bup** ***Result:*** A screen appears with the names of the files currently in the backup list.
7	In the Files to Add or Remove window, enter the full pathname of each of these files. Press Add after you enter each file name. /u/ivr/apps/*.vpf /u/ivr/log.d/*.log /u/ivr/exe/*.sai /u/ivr/sys_files /u/ivr/usr /u/ivr/3270 /u/ivr/vt100 /u/fax/db /u/fax/log /u/fax/fax_data /u/ivr/vrs/exe/lh.config ***Result:*** The file structure is placed in the backup list.
8	When you finish, press OK. ***Result:*** A screen appears with the options of Backup Now, Schedule Daily Backup, or Unschedule Daily Backup.

Step	Action
9	Select Backup Now and press OK. ***Result:*** The files are backed up.
10	After the backup finishes, select Quit.
11	Select Quit.
12	Remove the backup tape and label it with a name and date.

Chapter 3

Upgrading the hardware

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Overview

Introduction

This chapter provides the hardware procedures to

- migrate from Meridian IVR 1.x to ISIVR 2.2
- upgrade from Meridian IVR 2.x to ISIVR 2.2

The ISIVR 2.2 system is based on the 700t hardware system.

Migrating from Release 1.x to 2.2

If you are migrating from Meridian IVR 1.x, the ISIVR 2.2 software and almost all of the hardware is assembled at the factory. When the system arrives at your site, however, you must install the new 4.5 Gbyte hard drive.

For more information, refer to "Migrating from 1.x to 2.2" on page 3-7.

Upgrading from Release 2.x to 2.2

The ISIVR 2.2 system is made with many of the same hardware components and configuration settings as the Meridian IVR 2.x system. The software is installed at the factory. However, you must install the new hardware components at your site.

These components include

- a Seagate Barracuda ST34573WC Ultra-wide SCSI 4.5 Gbyte hard drive
- a TEAC CD-532S 32x SCSI CD-ROM drive
- a minimum base system memory of 64 Mbytes of RAM

For more information, refer to "Upgrading from 2.x to 2.2" on page 3-8.

Replacing the LAN card

A new Ethernet LAN card—a 3COM EtherLink XL PCI network card—is available in ISIVR 2.2.

You only need to install this card for the following reasons:

- Your existing system does not have an Ethernet card and you want to install one.
- You need to replace the existing Ethernet card.

For more information, refer to "Installing the Ethernet card" on page 3-29.

Replacing the serial port card

A new serial port card—a 16-port Digiboard PC/Xem serial port card—is available in ISIVR 2.2.

You only need to install this card for the following reasons:

- You have one PC/Xe card (eight ports) and want to upgrade to 16 ports.
- You need to replace the existing serial port card.
- You do not have an existing PC/Xem and you want to install one.

For more information, refer to "Installing the PC/Xem card" on page 3-31.

Section A: Start here

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Overview

Introduction

This section provides a summary of the hardware procedures you must follow to

- migrate from a Meridian IVR 1.x platform to an ISIVR 2.2 platform
- upgrade from a Meridian IVR 2.x system to an ISIVR 2.2 system

The summaries are designed to guide you through the detailed procedures that this chapter contains.

Migrating from 1.x to 2.2

Introduction

This section provides a high-level road map of the procedures you must follow to migrate your hardware from Meridian IVR 1.x to ISIVR 2.2.

Summarizing the migration procedure

To migrate the hardware, complete these procedures in the specified order.

Step	Action
1	Follow the preinstallation instructions described in "Preparing for 1.x to 2.2 migration" on page 2-8.
2	If the system is on, go to the # prompt and type **shutdown -y -g0**

3	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

4	Turn the system off.
5	Install the Seagate Barracuda ST34573WC Ultra-wide SCSI 4.5 Gbyte hard drive. ***Note:*** Although the 4.5 Gbyte hard drive is packaged with the 700t system, you must install it at your site. For more information, refer to "Installing the hard drive" on page 3-24.
6	Install the keylock and keylock cable. For more information, refer to "Attaching the security keylock" on page 3-28.
7	Connect the PORTS module to the PC/Xem card. ***Note:*** For more information, refer to "Connecting the PC/Xem card to the PORTS module" on page 3-34.
8	Power up the application processor.

Upgrading from 2.x to 2.2

Introduction

If you are upgrading from Meridian IVR 2.x, you will find that your ISIVR 2.2 system contains several new hardware components. This section provides a high-level road map of the steps you must follow to install these components at your site.

Summarizing the upgrade procedure

To upgrade the hardware, complete these procedures in the specified order.

Step	Action
1	Follow the preinstallation instructions described in "Preparing for 2.x to 2.2 upgrade" on page 2-9.
2	If the system is on, go to the # prompt and type **shutdown -y -g0**

3	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

4	Turn the system off.
5	Configure and install the TEAC CD-532S 32x SCSI CD-ROM drive. ***Note:*** For more information, refer to "Installing the CD-ROM drive" on page 3-17.
6	Install the Seagate Barracuda ST34573WC Ultra-wide SCSI 4.5 Gbyte hard drive. ***Note:*** For more information, refer to "Installing the hard drive" on page 3-24.
7	Install additional memory, if necessary. ***Note:*** For more information, refer to "Upgrading the SIMMS" on page 3-27.

Step	Action
8	Label your existing Meridian IVR 2.x hard drive and store it in a safe location. ***Note:*** It is recommended that you keep the hard drive so that you can restore your data, if necessary, in an emergency.
9	Verify that the keylock and keylock cable are properly installed. ***Note:*** For more information, refer to "Attaching the security keylock" on page 3-28.

Section B: Detailed procedures

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Overview

Introduction

This section provides the detailed hardware procedures required to

- migrate from a Meridian IVR 1.x platform to an ISIVR 2.2 platform
- upgrade from a Meridian IVR 2.x system to an ISIVR 2.2 system

Note: To follow the procedures in the correct order, refer to the summary described in Section A, "Start here," on page 3-5.

Using the diagrams

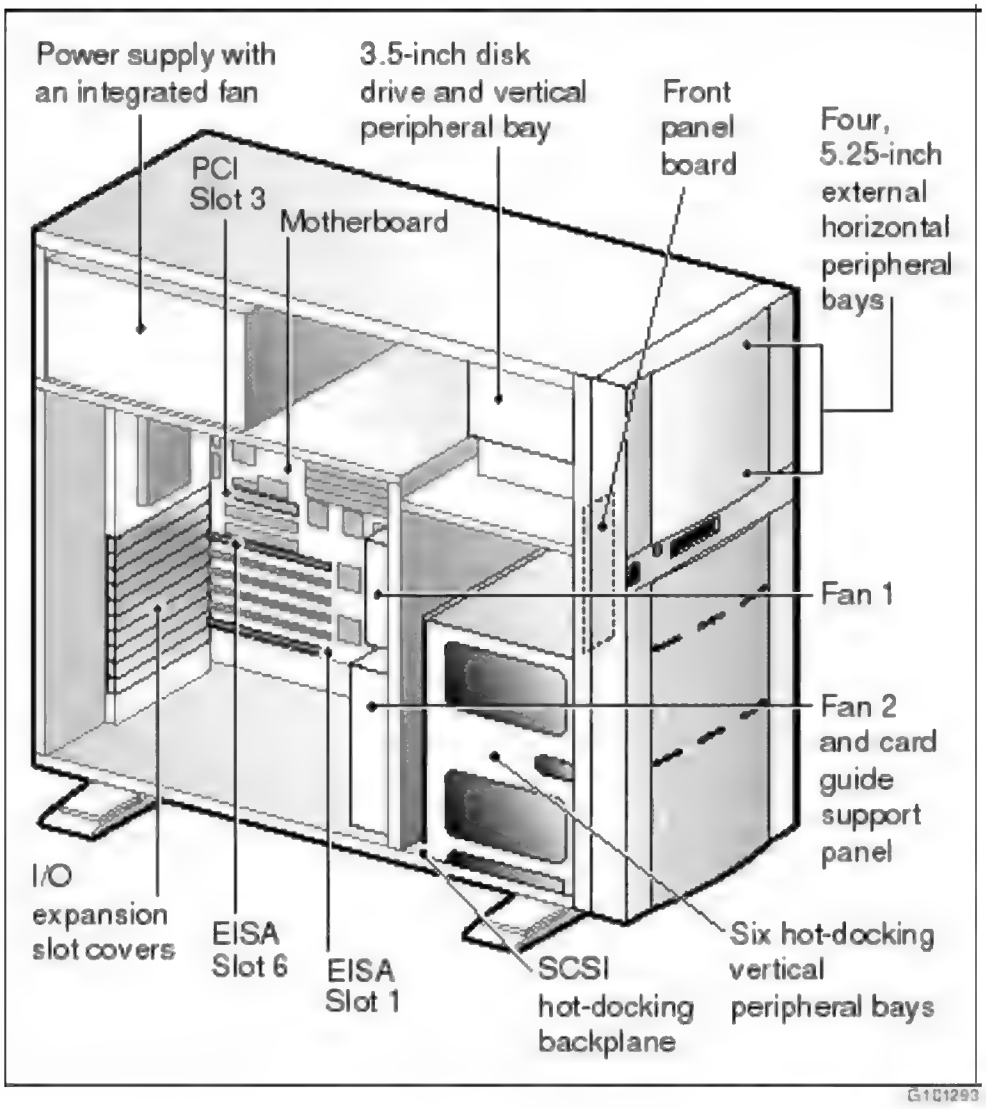
This chapter contains several overview diagrams to help you install the ISIVR 2.2.

The diagram on page 3-13 shows the inside of the 700t application processor.

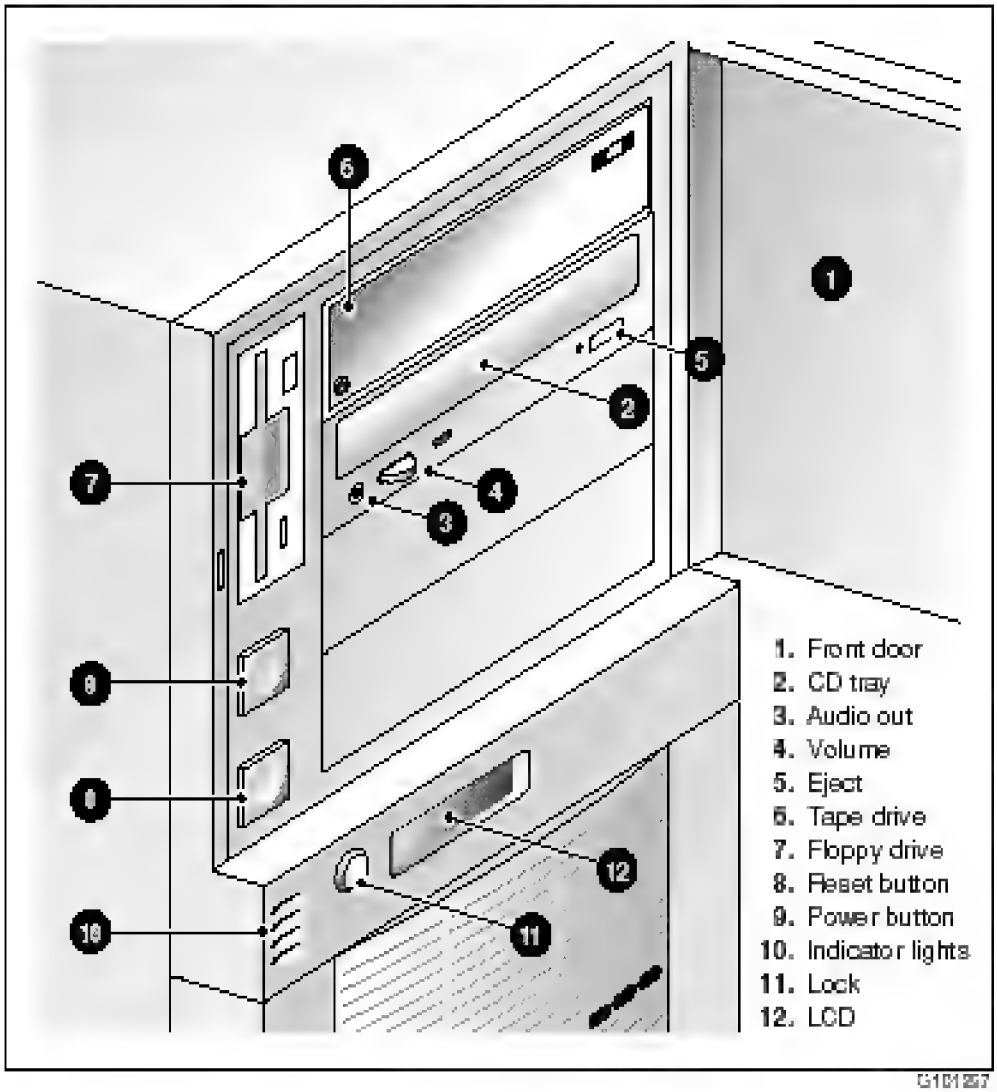
The diagram on page 3-14 shows a view of the 700t application processor with the front door open.

The diagram on page 3-15 shows a view of the 700t motherboard.

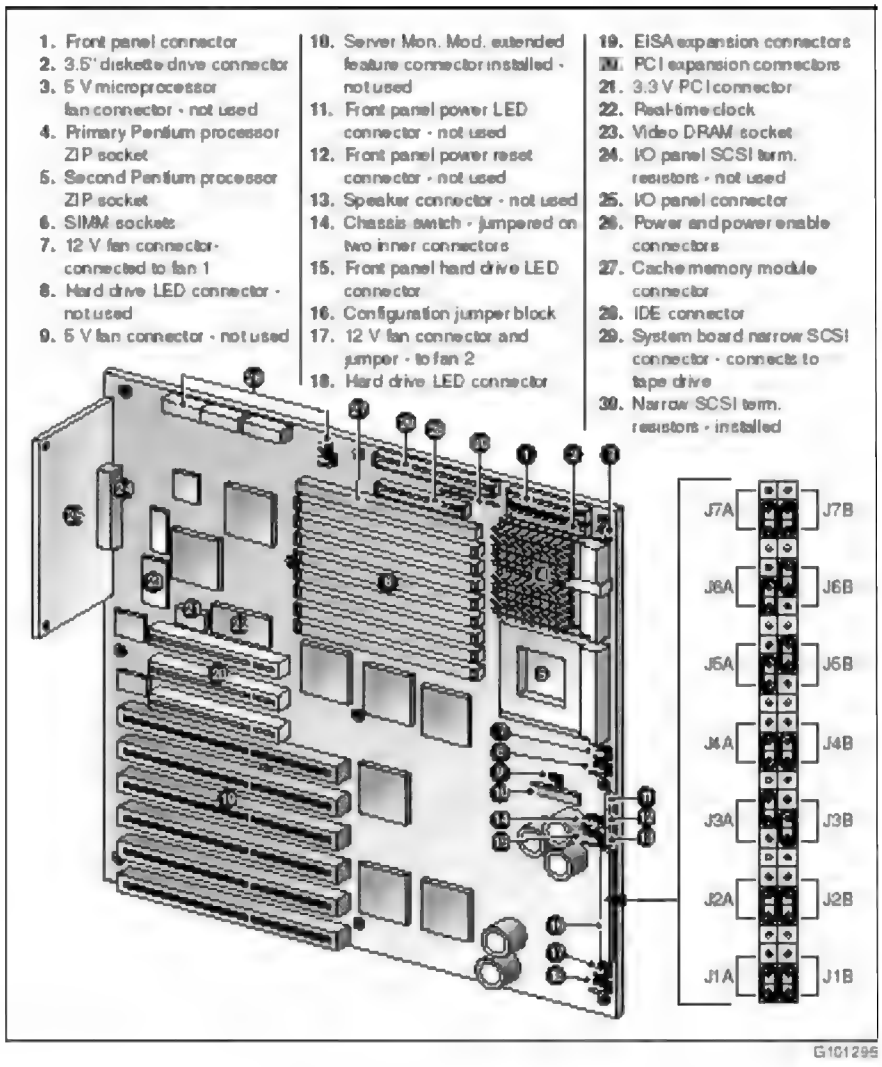
Inside view of the 700t application processor



View of the 700t application processor with front door open



700t motherboard


1. Front panel connector
2. 3.5" diskette drive connector
3. 5 V microprocessor fan connector - not used
4. Primary Pentium processor ZIP socket
5. Second Pentium processor ZIP socket
6. SIMM sockets
7. 12 V fan connector - connected to fan 1
8. Hard drive LED connector - not used
9. 5 V fan connector - not used
10. Server Mon. Mod. extended feature connector installed - not used
11. Front panel power LED connector - not used
12. Front panel power reset connector - not used
13. Speaker connector - not used
14. Chassis switch - jumpered on two inner connectors
15. Front panel hard drive LED connector
16. Configuration jumper block
17. 12 V fan connector and jumper - to fan 2
18. Hard drive LED connector
19. EISA expansion connectors
20. PCI expansion connectors
21. 3.3 V PCI connector
22. Real-time clock
23. Video DRAM socket
24. I/O panel SCSI term. resistors - not used
25. I/O panel connector
26. Power and power enable connectors
27. Cache memory module connector
28. IDE connector
29. System board narrow SCSI connector - connects to tape drive
30. Narrow SCSI term. resistors - installed
J7A
J7B
J6A
J6B
J5A
J5B
J4A
J4B
J3A
J3B
J2A
J2B
J1A
J1B
G101295

Note: The jumper settings indicated in this diagram are shown for illustration purposes only. You do not need to use these settings.

Preparing the CD-ROM drive jumper settings

Introduction

This section describes the jumper settings for the TEAC CD-532S 32x SCSI CD-ROM drive.

Configuring the settings

When you configure the CD-ROM drive jumper settings, it is important to know the following:

- The CD-ROM drive must be set to SCSI ID 5.
- The CD-ROM drive is not terminated.

CD-ROM jumper settings

This table shows the CD-ROM jumper settings.

Jumper position	S0	S1	S2	S3	S4	S5	S6
Jumper setting	ON	OFF	ON	OFF	OFF	OFF	OFF

Installing the CD-ROM drive

Introduction

This section describes how to install the TEAC CD-532S 32x SCSI CD-ROM drive.

The server includes four 5.25-inch half-height bays that provide space for tape backup, CD-ROM, and other removable media devices.

The top bay, which is numbered Bay 1, contains the tape drive. The CD-ROM is installed in Bay 2, which is below Bay 1.

Installing the CD-ROM drive

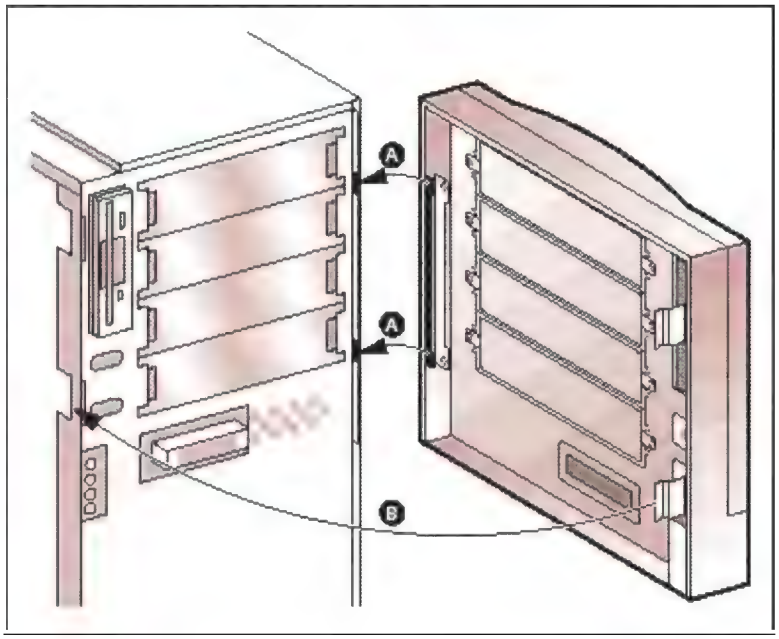
To install the CD-ROM drive, follow these steps.

Step	Action
1	If the system is on, go to the # prompt and type **shutdown -y -g0**

2	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

3	Turn the system off.
4	Remove the upper front door of the application processor by unclipping the door as shown in (A) and (B) in the diagram on page 3-18.
5	Push the tab on the left side of the metal shield to the right to disengage it from the chassis.

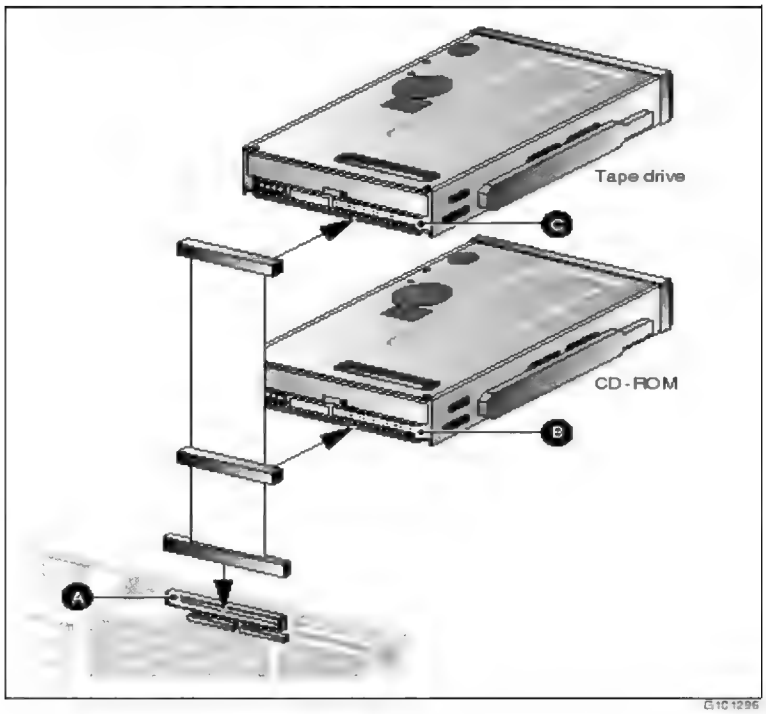
Removing the upper front door



Step	Action
6	Remove the CD-ROM drive from its protective wrapper and place it on an antistatic surface.
7	Record the model and serial number of the CD-ROM drive in your equipment log.
8	Configure the CD-ROM jumper settings. ***Note:*** For more information, refer to "Preparing the CD-ROM drive jumper settings" on page 3-16.
9	Attach the plastic snap-in slide rail B to the left side of the CD-ROM drive using two screws and a grounding clip. You should install the grounding clip under the screw used at the front of the device.

Step	Action
10	Attach rail A to the right side of the CD-ROM drive using two screws.
11	Position the CD-ROM drive so that the plastic slide rails on each side engage in the bay guide rails.
12	Push the CD-ROM drive into the bay until the slide rails lock in place.
13	Ensure that the SCSI terminating resistor packs are removed from the system board. ***Note:*** For placement of the resistors, refer to Item 30 in the diagram on page 3-15.
14	Ensure that one end of the narrow SCSI signal cable is connected to the motherboard, as shown in the diagram on page 3-20.
15	If necessary, verify that the tape drive is terminated and connected to the last connector on the signal cable. ***Note:*** Your tape drive should already be terminated and connected.
16	Connect the CD-ROM drive to the next-to-last connector on the signal cable.
17	Connect the power cable to the back of the CD-ROM drive. The connectors are keyed and can only be inserted one way.
18	Replace the side cover and front door assembly.

SCSI cable installation



Preparing the hard drive jumper settings

Introduction

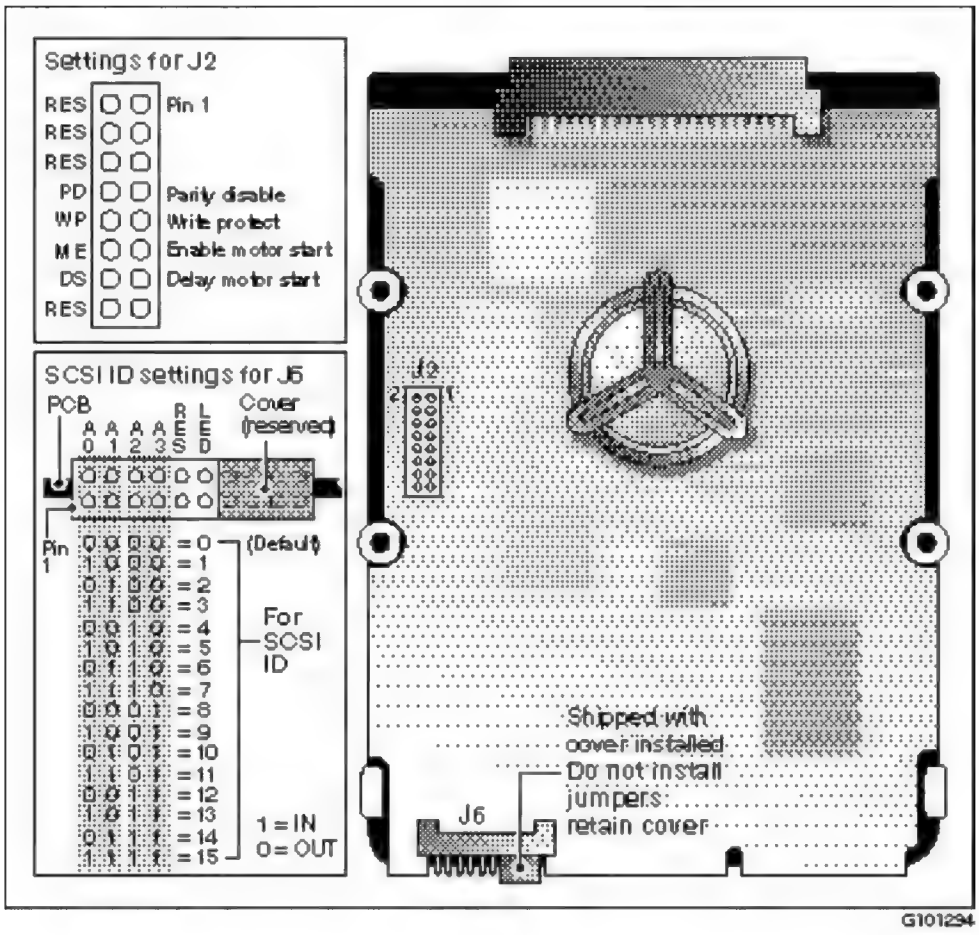
This section describes the jumper settings that you use with the Seagate Barracuda ST34573WC Ultra-wide SCSI 4.5 Gbyte hard drive.

Identifying the jumper blocks

You use two jumper blocks to configure the hard drive. The jumper block J2, which is located on the underside of the drive, sets the drive termination. The jumper block J6, which is located on the front of the drive, sets the drive's SCSI ID.

The diagram on page 3-22 shows the location and settings on the new hard drive for the jumper block J2 and the jumper block J6.

Jumper block settings



Configuring the jumper block J2 settings

When you configure the jumper block J2 settings, it is important to know the following:

- Jumper block J2 positions 7-8 are off (parity check enabled).
- The hard drive should not be terminated.

Jumper block J2 settings

This table shows the jumper block J2 settings.

Jumper position	15-16	13-14	11-12	9-10	7-8	5-6	3-4	1-2
Jumper label	NU	DS	ME	WP	PD	SS	NU	NU
Jumper setting	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

Configuring the jumper block J6 settings

When you configure the jumper block J6 settings, it is important to know the following:

- The SCSI ID of the hard drive is 0.
- You cannot use the jumper block J6 reserved positions 13-20.

Jumper block J6 settings

This table shows the jumper block J6 settings.

SCSI ID	19-20	17-18	15-16	13-14	11-12	9-10	7-8	5-6	3-4	1-2
0	RES	RES	RES	RES	OFF	OFF	OFF	OFF	OFF	OFF

Installing the hard drive

Introduction

This section describes how to install the Seagate Barracuda ST34573WC Ultra-wide SCSI 4.5 Gbyte hard drive.

Note: The installation program automatically partitions the hard drive. Additional hard drives are not supported.

Preparing for installation

Before you install the hard drive, follow these steps.

Step	Action
1	If the system is on, go to the # prompt and type **shutdown -y -g0**

2	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

3	Turn the system off.
4	If you are upgrading from Meridian IVR 2.x to ISIVR 2.2, remove the existing hard drive by pulling the lever on the plastic carrier to the left and pulling it out. If you are upgrading from Meridian IVR 1.x to ISIVR 2.2, go to step 8. ***Note:*** For more information, refer to the *Meridian IVR Maintenance and Diagnostics Guide* (NTP 555-9001-500), "Maintenance activities" chapter, "Removing and installing the diskette drive" section, Procedure 4-6 on page 4-13.
5	Remove the existing hard drive by unscrewing it from the plastic carrier.
6	Keep the four screws and plastic carrier that are used to house the existing hard drive.

Step	Action
7	Label the hard drive and store it in a safe place.
8	Remove the new 4.5 Gbyte hard drive from its protective wrapper and place it component-side up on an antistatic surface.
9	Configure the hard drive jumper settings. ***Note:*** Configure the jumpers if you are installing the software on a new hard drive. If the factory installed the software on your hard drive, do not configure the settings. They are already configured at the factory. In this case, you only need to verify the settings. For more information, refer to "Preparing the hard drive jumper settings" on page 3-21.

Installing the hard drive

After you configure the jumper settings, follow these steps.

Step	Action
1	Place the plastic driver carrier on the component-side of the drive aligning the four mounting holes.
2	Use the four screws to attach the plastic carrier assembly to the new drive.
3	Open the lower plastic front door of the 700t server.
4	If a padlock is installed on the metal doors of the hot-docking bay, remove it.
5	Loosen the two captive spring-loaded thumbscrews that secure the metal door to the chassis and open the door.
6	Position the plastic carrier and drive assembly so that they engage the hot-docking bay guide rails.
7	Gently push the drive into the bay until it docks with the hot-docking backplane connector.
8	Push the plastic lever to the right until it locks around the small metal posts and locks the drive in place.

Step	Action
9	Gently close the metal door.
10	Tighten the two captive spring-loaded thumbscrews to secure the metal door to the chassis.
11	If a padlock was installed, replace it.
12	Close the lower plastic front door of the server.
13	Power up the application processor.

Upgrading the SIMMS

Introduction

The base system memory must have a minimum of 64 Mbytes of RAM in ISIVR 2.2. This section is useful if you need to replace or update your SIMMS.

Upgrading from Release 1.x

If you are upgrading from Meridian 1.x, 64 Mbytes (minimum) of RAM are installed at the factory.

Upgrading from Release 2.x

If you are upgrading from Meridian 2.x, you must ensure that your system has a minimum of 64 Mbytes of RAM.

When installing SIMMS

When you install the system board SIMMS, you should know the following:

- The 700t system has four memory banks. Each bank has two SIMM sockets.
- Install the SIMMS from top to bottom.
- Leave no socket or bank empty between any two SIMMS.
- Each SIMM is keyed with a notch on one corner. It is only inserted one way.
- The SIMM must be held at an angle of 45 degrees and pressed firmly into the socket.
- You must rotate the SIMM vertically so that it is held in place by the retaining clip.
- When installed properly, the SIMM is perpendicular to the system board.

Note: If necessary, you can use a combination of 8 Mbyte SIMMS along with 16 Mbyte SIMMS to bring your RAM level up to 64 Mbytes. However, the 8 Mbyte SIMMS and 16 Mbyte SIMMS cannot be used in the same bank.

Attaching the security keylock

Introduction

ISIVR 2.2 uses the same security keylock as Meridian IVR 2.x.

For more information, refer to the *Meridian IVR Installation Guide* (NTP 555-9001-210), Chapter 2, "Installation," "Installing the key lock security device" section on page 2-22.

Verifying the security keylock

To verify that the security keylock is installed properly, you should know the following:

- The security keylock cable is attached to serial port 1 (COM 1).
- The keylock cable connects the security keylock to the COM port.

Installing the Ethernet card

Introduction

ISIVR 2.2 provides a new Ethernet card—the 3COM EtherLink XL PCI (3c900b).

This section describes how to install this card.

Note: For more information on how to install the Ethernet card, refer to the *Meridian IVR Maintenance and Diagnostics Guide* (NTP 555-9001-500), "Maintenance activities" chapter, "Add-in boards" section on page 4-21.

Before you begin

You must install the new Ethernet card in the following circumstances:

- Your existing system does not have an Ethernet card and you want to install one.
- You need to replace the existing Ethernet card.

Note: The ZNYX Ethernet card, used in Meridian IVR 2.x, is no longer sold. If you require a new Ethernet card, you will receive a 3COM card. Nortel Networks, however, offers technical support for both cards.

Configuring the card

The 3COM EtherLink XL PCI (3c900b) card requires no adjustments to the hardware configuration settings. You insert the card in PCI slot 3.

The diagram on page 3-13 shows the positioning of the PCI and EISA slots on the motherboard. The diagram on page 3-15 shows a detailed view of the 700t motherboard.

Installing the network card

To install the network card, follow these steps.

Step	Action
1	If the system is on, go to the # prompt and type **shutdown -y -g0**

2	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

3	Turn the system off.
4	Remove the expansion slot screw.
5	Remove the expansion slot cover.
6	Remove any existing Ethernet cards.
7	Hold the new card by its top edges and firmly press it into the PCI slot 3. ***Note:*** Ensure that the tapered end of the retaining bracket is aligned to fit into the notch at the end of the expansion slot.
8	Attach the retaining bracket to the chassis with the expansion slot screw.

Installing the PC/Xem card

Introduction

ISIVR 2.2 provides a new serial port card—the 16-port Digiboard PC/Xem.

This section describes how to install this card.

For more information on how to install the PC/Xem card, refer to the *Meridian IVR Maintenance and Diagnostics Guide* (NTP 555-9001-500), "Maintenance activities" chapter, "Add-in boards" section on page 4-21.

Before you begin

You must install the PC/Xem card only in the following circumstances:

- You have one PC/Xe card (eight ports) and want to upgrade to 16 ports.
- You need to replace the existing serial port card.
- You do not have an existing PC/Xem and you want to install one.

Note: You cannot have a PC/Xem and a PC/Xe serial card on the same system. You can install only one PC/Xem card on a system.

Configuring the PC/Xem card

When you configure the PC/Xem serial port card, it is important to know the following:

- The I/O address on Switch DS1 must be set to 304h.
- The factory default jumper settings must not be changed on J1, J2, J3.
- The PC/Xem serial port card is inserted in EISA slot 1.

- The /user/ivr/vrs/exe/lh.config file varies slightly depending on whether your system has a PC/Xem card or a PC/Xe card. For a system with a PC/Xem card, the tty elements in the file have the format ttyaXX where XX is a two-digit number). For a system with a PC/Xe card, the tty elements have the format ttyiYZ (where Y is a single-digit number and Z is a lowercase letter). For more information, refer to the *Meridian IVR Installation Guide* (NTP 555-9001-210), Chapter 3, "Configuring Meridian IVR for testing," "Setting the link speed on the Meridian IVR AP" section on page 3-16.

I/O address settings

This table shows the I/O address settings on Switch DS1.

I/O Address	1	2	3	4
304h	ON	ON	OFF	ON

Factory default jumper settings

This table shows the factory default jumper settings.

Jumper	Setting
J1	Position 1-2 = ON
J2	Position 1-2 = ON
J3	Position 1-2 = ON

The diagram on page 3-13 shows the positioning of the PCI and EISA slots on the motherboard.

Installing the PC/Xem card

To install the PC/Xem card, follow these steps.

Step	Action
1	If the system is on, go to the # prompt and type **shutdown -y -g0**

2	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

3	Turn the system off.
4	Remove the expansion slot screw.
5	Remove the expansion slot cover.
6	Remove any existing serial port cards.
7	Hold the new card by its top edges and firmly press it into the EISA slot 1. ***Note:*** Ensure that the tapered end of the retaining bracket aligns to fit into the notch at the end of the expansion slot.
8	Attach the retaining bracket to the chassis with the expansion slot screw.
9	Go to "Connecting the PC/Xem card to the PORTS module" on page 3-34.

Connecting the PC/Xem card to the PORTS module

The PORTS/16em module provides 16 EIA-232 asynchronous serial ports. The PORTS module is connected to the PC/Xem board with the Digi EBI cable.

To connect the PC/Xem card to the PORTS/16em module, follow this step.

Step	Action
1	Plug one end of the Digi EBI cable into the PC/Xem board, and plug the other end into the connector on the PORTS module labeled EBI IN.

Installing the second PC/Xe card

Introduction

One 8-port Digiboard PC/Xe card is installed at the factory. If you are upgrading from Meridian IVR 2.x, you can add a second PC/Xe card at your site.

Note: A PC/Xe and a PC/Xem serial board cannot coexist on the same system.

Setting the dip switches

This table shows the dip switch settings for the second PC/Xe board.

Dip Switches	1	2	3	4
Settings	ON	ON	ON	ON

Installing the second PC/Xe card

To install the second PC/Xe card, follow these steps.

Step	Action
1	Locate EISA expansion slot 2 on the motherboard. ***Note:*** The diagram on page 3-13 shows the positioning of the EISA slots on the motherboard.
2	Remove the expansion slot screw.
3	Remove the expansion slot cover.
4	Hold the board by its top edges and firmly press it into the expansion slot. ***Note:*** Ensure that the tapered end of the retaining bracket aligns to fit into the notch at the end of the expansion slot.
5	Attach the retaining bracket to the chassis with the expansion slot screw.

Chapter 4

Upgrading the software

In this chapter

Overview	4-2
Section A: Start here	4-3
Section B: Detailed procedures	4-11

Overview

Introduction

This chapter provides the software procedures to

- migrate from Meridian IVR 1.x to ISIVR 2.2
- upgrade from Meridian IVR 2.x to ISIVR 2.2

Migrating from Release 1.x to 2.2

If you are migrating from Meridian 1.x, your ISIVR 2.2 software is installed and configured at the factory. The software contains the options specific to your site based on your existing keycode information.

After you receive the system, you must complete the installation process described in "Migrating from Release 1.x to 2.2" on page 4-5.

Upgrading from Release 2.x to 2.2

If you are upgrading from Meridian 2.x, your ISIVR 2.2 software is also installed and configured at the factory with the options specific to your site.

You must complete the installation process described in "Upgrading from Release 2.x to 2.2" on page 4-7.

Section A: Start here

In this section

Overview 4-4
Migrating from Release 1.x to 2.2 4-5
Upgrading from Release 2.x to 2.2 4-7

Overview

Introduction

This section provides a summary of the software procedures that you must follow to

- migrate from a Meridian IVR 1.x platform to an ISIVR 2.2 platform
- upgrade from a Meridian IVR 2.x system to an ISIVR 2.2 system

The summaries are designed to guide you through the detailed procedures that this chapter contains.

Migrating from Release 1.x to 2.2

Introduction

If you are migrating from Meridian IVR 1.x to ISIVR 2.2, your software is installed at the factory on the new 4.5 Gbyte hard drive. This section provides a high-level road map of the steps you must follow to complete the software installation process at your site.

Note: Any software patches on the Release Supplement CD are also pre-installed at the factory.

Summarizing the migration process

To migrate the software, complete these procedures in the specified order.

Step	Action
1	Follow the preinstallation instructions described in "Preparing for 1.x to 2.2 migration" on page 2-8.
2	Assemble the hardware. ***Note:*** For more information, refer to "Migrating from 1.x to 2.2" on page 3-7.
3	Power up the system.
4	Configure the access links by modifying the contents of the /u/ivr/vrs/exe/lh.config file. ***Note:*** For more information, refer to the *Meridian IVR Installation Guide* (NTP 555-9001-210), Chapter 3, "Configuring Meridian IVR for testing," "Setting the link speed on the Meridian IVR AP" section on page 3-16.
5	Configure the LAN IP address. ***Note:*** For more information, refer to "Configuring the LAN IP address" on page 4-29.

Step	Action
6	If applicable, activate the Host Connectivity option to interface with several types of host computers. ***Note:*** For more information, refer to "Adding a new host adapter" on page 6-25.
7	Transfer and convert the Meridian IVR 1.x applications to ISIVR 2.2. ***Note:*** For more information, refer to Chapter 7, "Transferring and converting files".
8	If you used an external modem prior to the upgrade, type **enable tty2A** at the # prompt. ***Note:*** This command activates the dial-in feature in your external modem. ***Note:*** When connecting through a modem to an ISIVR 2.2 system, you must ensure that the remote modem connects at 9600 baud. Refer to your modem manufacturer's instructions on how to connect at 9600 baud.
9	Use the System Configuration Management window to configure the node and channels are configured. ***Note:*** For more information on the window, refer to the *Meridian IVR System Administration Guide* (NTP 555-9001-300), Chapter 1, "System configuration."
10	Perform a full system backup on the ISIVR 2.2 system. ***Note:*** For more information, refer to "Performing a full system backup" on page 8-3.

Upgrading from Release 2.x to 2.2

Introduction

After you receive the ISIVR 2.2 system from the factory, you must complete the software installation process at your site. This section provides a high-level road map of the steps you must follow to complete this process.

Summarizing the upgrade procedure

To upgrade the software, complete these procedures in the specified order.

Step	Action
1	Follow the preinstallation instructions described in "Preparing for 2.x to 2.2 upgrade" on page 2-9.
2	Assemble the hardware. ***Note:*** For more information, refer to "Upgrading from 2.x to 2.2" on page 3-8.
3	Verify the BIOS. ***Note:*** For more information, refer to "Verifying the BIOS version" on page 4-13.
4	Upgrade the SCU. ***Note:*** For more information, refer to "Upgrading the SCU" on page 4-16.
5	Power up the system.
6	If you installed a second PC/Xe serial card at your site, configure it. ***Note:*** For more information, refer to "Configuring the second PC/Xe card" on page 4-25.
7	Configure the LAN IP address. ***Note:*** For more information, refer to "Configuring the LAN IP address" on page 4-29.

Step	Action
8	If applicable, restore the Express database. ***Note:*** For more information, refer to "Restoring the Express database" on page 4-39.
9	If applicable, activate the Host Connectivity option to interface with several types of host computers. ***Note:*** For more information, refer to "Adding a new host adapter" on page 6-25.
10	If the Express database is restored, update the node and link definitions. ***Note:*** For more information, refer to "Updating node and link definitions" on page 4-40.
11	Use the xbup tool to restore the files you backed up in "Using the xbup tool" on page 2-11. ***Note:*** For more information on how to use the xbup tool to restore the files, refer to the procedure described in "Restoring files using xbup" on page 7-8.
12	Convert the Meridian IVR 2.x applications to ISIVR 2.2. ***Note:*** For more information, refer to "Converting the files for ISIVR 2.2" on page 7-11.
13	If you used an external modem prior to the upgrade, type **enable tty2A** at the # prompt. ***Note:*** This command activates the dial-in feature in your external modem. ***Note:*** When connecting through a modem to an ISIVR 2.2 system, you must ensure that the remote modem connects at 9600 baud. Refer to your modem manufacturer's instructions on how to connect at 9600 baud.
14	If you have the Fax Response feature, restore the system parameters and modem configurations that you noted in "Preparing for 2.x to 2.2 upgrade" on page 2-9. ***Note:*** For more information, refer to the *Meridian IVR Fax Application Guide* (NTP 555-9001-350), Chapter 5, "Administering your system."

Step	Action
15	Perform a full system backup on the ISIVR 2.2 system. ***Note:*** For more information, refer to "Performing a full system backup" on page 8-3.

Section B: Detailed procedures

In this section

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Overview

Introduction

This section provides the detailed software procedures required to

- migrate your software from Meridian IVR 1.x to ISIVR 2.2
- upgrade your software from Meridian IVR 2.x to ISIVR 2.2

Note: To follow the procedures in the correct order, refer to Section A, "Start here," on page 4-3.

Verifying the BIOS version

Introduction

When the application processor is powered on, the system BIOS reads the system configuration information from memory and initializes the adapter cards.

To upgrade from Meridian IVR 2.x to ISIVR 2.2, you must verify that your BIOS version is 1.00.17.BIOS.

This section tells you how to verify your BIOS version and upgrade it, if necessary.

Checking the BIOS version

To check your BIOS version, follow these steps.

Step	Action
1	Insert an MS-DOS (6.22 or higher) boot disk into the floppy drive.
2	Turn on the application processor.

3	Watch for the second line to appear after the system starts.
	Result: The following message appears:
	`AMBIOS (C) 1992 American Megatrends, Inc.`
	`BIOS Version 1.00.17.BIO`
	`...`
	`Floppy A: Installed`
	`Adaptec AIC-7870 BIOS v1.19S6`
	`(C) 1995 Adaptec, Inc. All Rights Reserved.`
	`...`
	Note: The second line flashes by quickly. If you miss it, turn the application processor off and on.

Step	Action
4	If your BIOS version is equal to 1.00.17.BIOS, you do not need to proceed any further in this BIOS procedure. If your BIOS version is equal to or less than 1.00.07.BIOS, go to the procedure described in "Upgrading if equal to or less than BIOS 1.00.07" on page 4-14. If your BIOS version is greater than 1.00.07.BIOS but less than 1.00.17, go to "Upgrading if greater than BIOS 1.00.07 but less than 1.00.17" on page 4-15.

Upgrading if equal to or less than BIOS 1.00.07

To upgrade if the AP is running a BIOS version less than or equal to BIOS 1.00.07, follow these steps.

Step	Action
1	Remove the MS-DOS boot disk from the floppy drive.
2	Insert the ISIVR 2.2 BIOS 1.00.17 Update Diskette into the floppy drive.
3	At the A:\ prompt, type **1** ***Result:*** A message appears indicating that the BIOS upgrade was successful.
4	Remove the disk from the floppy drive.
5	Reboot the system.

Upgrading if greater than BIOS 1.00.07 but less than 1.00.17

To upgrade if the AP is running a BIOS version greater than BIOS 1.00.07 but less than 1.00.17, follow these steps.

Step	Action
1	Remove the MS-DOS boot disk from the floppy drive.
2	Insert the ISIVR 2.2 BIOS 1.00.17 Update Diskette into the floppy drive.
3	At the A:\ prompt, type **3** ***Result:*** The Flash Memory Update Utility Rel 3.2 screen appears.
4	Press Enter. ***Result:*** The Main Menu appears.
5	Select Update Flash Memory from a file. ***Result:*** The Update Flash Area screen appears.
6	Select Update System BIOS + User Flash. ***Result:*** The Enter Path/Filename screen appears.
7	Using the Tab key, move the cursor to 1.00.17 BIOS file and press Enter. ***Result:*** The Verify Image screen appears.
8	Select Continue with programming. ***Result:*** The Flash upgrade message appears.
9	Select Continue upgrade. ***Result:*** A message appears indicating that the BIOS upgrade was successful.
10	Remove the disk from the floppy drive.
11	Reboot the system.

Upgrading the SCU

Introduction

You must upgrade the System Configuration Utility (SCU) for 700t systems using BIOS version 1.00.17.BIOS.

ISIVR 2.2 uses SCU Version 3.40, Overlay 1.03. This version replaces SCU Version 3.31, Overlay 1.02, which is used in Meridian IVR 2.x.

To upgrade the SCU, you must do the following:

- Back up your current SCU settings.
- Clear the CMOS NVRAM.
- Update the system parameters configuration.

Backing up the settings

The settings are captured in the settings.txt file in the SCU (Version 3.31) disk. These settings can be customer-specific and reused.

To back up the settings, follow these steps.

Step	Action
1	Insert an MS-DOS (6.22 or higher) boot disk into the floppy drive.
2	Turn on the application processor.
3	Wait for the A:\ prompt to appear.
4	Remove the MS-DOS boot disk from the floppy drive.
5	Ensure that the write-protect is disabled on the SCU disk (Version 3.31, Overlay 1.02).
6	Insert the SCU disk into the floppy drive.

Step	Action

7	At the A:\ prompt, type **scu**
	Result: The SCU title screen displays the following information:
	`Intel Servers`
	`System Configuration Utility`
	`Version 3.31 Release`
	`Overlay 1.02 Release`

8	Press any key to continue. ***Result:*** After the SCU is loaded, the System Configuration Utility menu appears.
9	From the System Configuration Utility menu, select Step 4: Save Configuration. ***Result:*** The system saves the configuration files.
10	Press Escape to skip the Password Menu.
11	If a warning message or error message appears, press Enter.
12	Wait for the system to save the system's configuration settings to the floppy disk and nonvolatile memory.
13	From the System Configuration Utility menu, select Step 6: Exit. ***Result:*** A message appears that asks you to confirm that you want to exit.
14	Press Enter.
15	Remove the SCU disk from the drive.
16	Reboot the system.
17	Go to "Clearing the CMOS NVRAM" on page 4-18.

Clearing the CMOS NVRAM

To clear the NVRAM located on the motherboard and reset it to the factory default settings, follow these steps.

Step	Action
1	Complete "Backing up the settings" on page 4-16.
2	If the system is on, go to the # prompt and type **shutdown -y -g0**

3	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

4	Turn the system off.
5	Pull out the hard drive.
6	On the motherboard, move jumper J1B from pins 1-2 to 2-3. ***Note:*** To view the jumper positions on the motherboard, refer to the diagram on page 3-15.
7	Turn on the application processor.
8	Wait for the POST to complete. ***Result:*** The message `NVRAM cleared by jumper` appears.
9	Turn off the application processor.
10	Reinsert the hard drive.
11	On the motherboard, move jumper J1B from pins 2-3 to 1-2.
12	Go to "Updating the system parameters configuration" on page 4-19.

Updating the system parameters configuration

To continue upgrading the SCU, you must follow these steps to update the system parameters configuration.

Step	Action
1	Complete "Clearing the CMOS NVRAM" on page 4-18.
2	Insert an MS-DOS (6.22 or higher) boot disk into the floppy drive.
3	Turn on the application processor.
4	Wait for the A:\ prompt to appear.
5	Remove the MS-DOS boot disk from the floppy drive.
6	Ensure that the write-protect is disabled on the SCU disk (Version 3.40, Overlay 1.03).
7	Insert the SCU disk into the floppy drive.

8	At the A:\ prompt, type **scu**
	Result: The SCU title screen displays the following information:
	`Intel Servers`
	`System Configuration Utility`
	`Version 3.40 Release`
	`Overlay 1.03 Release`

9	Press any key to continue. ***Result:*** After the SCU is loaded, The System Configuration Utility menu appears.
10	Select Step 3: Change Configuration Settings. ***Result:*** The system creates the configuration files.
11	Press Escape to skip the Password Menu.
12	If a warning message or error message appears, press Enter.

Step	Action

13	Wait for this menu to appear:
	`Step 3 - Change Configuration Settings`
	`System Board`
	`PCI Undefined Device`
	`PCI Ethernet Device`
	`PCI SCSI Device`
	`PCI VGA Device`

14	Select System Board.
15	If a warning message appears, press Enter. ***Result:*** The Edit Settings for: System Board screen appears.
16	Scroll through the options on the screen. Ensure that the following options have these settings: • Shadowing ISA ROMs Options: C0000 to E4000 Disable • On-Board IDE Controller: Disable • LCD Display String Enable or Disable: Enable • LCD Display String Before OS Boot: Nortel Networks Symposium IVR ***Note:*** Press Ctrl-d to disable the options listed in the Shadowing ISA ROMs Options: C0000 to E4000 option. If a check mark appears beside one of these options, it is still enabled.
17	Press Escape to exit the System Board menu. ***Result:*** The Step 3 - Change Configuration Settings screen appears.
18	Go to “Configuring the PCI Ethernet adapter” on page 4-21.

Configuring the PCI Ethernet adapter

To configure the PCI Ethernet adapter, follow these steps.

Step	Action
1	Complete "Updating the system parameters configuration" on page 4-19.
2	From the System Configuration Utility menu, select Step 3 - Change Configuration Settings. ***Result:*** The Step 3 - Change Configuration Settings screen appears.
3	Select PCI Ethernet Device and press Enter. ***Result:*** The Enabled: Current Configuration screen appears.
4	Select Enter. ***Result:*** The Ethernet (Function 0) screen appears.
5	Select Enabled: Manual Configuration and press Enter. ***Result:*** The Enabled: Manual Configuration screen appears.
6	Press F6.
7	Use the + or - keys to change the *IRQ* field to 10.
8	Press Enter.
9	Press Escape to return to the Step 3 - Change Configuration Settings screen.
10	Go to "Configuring the PCI SCSI device" on page 4-22.

Configuring the PCI SCSI device

To configure the PCI SCSI device, follow these steps.

Step	Action
1	Complete the procedure called "Configuring the PCI Ethernet adapter" on page 4-21.
2	From the System Configuration Utility menu, select Step 3 - Change Configuration Settings. ***Result:*** The Step 3 - Change Configuration Settings screen appears.
3	Select PCI SCSI Device and press Enter. ***Result:*** The Enabled: Current Configuration screen appears.
4	Select Enter. ***Result:*** The SSCI (Function 0) screen appears.
5	Select Enabled: Manual Configuration and press Enter. ***Result:*** The Enabled: Manual Configuration screen appears.
6	Press F6.
7	Use the + or - keys to change the *IRQ* field to 11.
8	Press Enter.
9	Press Escape to return to the Step 3 - Change Configuration Settings screen.
10	Go to "Configuring the PCI VGA device" on page 4-23.

Configuring the PCI VGA device

The PCI VGA device is an onboard chip. To configure this device, follow these steps.

Step	Action
1	Complete "Configuring the PCI SCSI device" on page 4-22.
2	From the System Configuration Utility menu, select Step 3 - Change Configuration Settings. ***Result:*** The Step 3 - Change Configuration Settings screen appears.
3	Select PCI VGA Device and press Enter. ***Result:*** The Enabled: Current Configuration screen appears.
4	Select Enter. ***Result:*** The VGA (Function 0) screen appears.
5	Select Enabled: Manual Configuration and press Enter. ***Result:*** The Enabled: Manual Configuration screen appears.
6	Press F6.
7	Use the + or - keys to change the *IRQ* field to 9.
8	Press Enter.
9	Press Escape to return to the Step 3 - Change Configuration Settings screen.
10	Press Escape. ***Result:*** The System Configuration Utility menu appears.
11	Go to "Saving the settings" on page 4-24.

Saving the settings

To save the configuration settings, follow these steps.

Step	Action
1	Complete "Configuring the PCI VGA device" on page 4-23.
2	From the System Configuration Utility menu, select Step 4: Save Configuration. ***Result:*** The settings are saved to the INT31A0.set file.
3	From the System Configuration Utility menu, select Step 6: Exit. ***Result:*** A message appears asking you to confirm that you want to exit.
4	Press Enter.
5	Remove the SCU disk from the drive.
6	Reboot the system.

Configuring the second PC/Xe card

Introduction

This section describes the procedure to configure the second 8-port Digiboard PC/Xe serial port card.

Upgrading from Meridian IVR 2.x

If you are upgrading from Meridian IVR 2.x, you can have one or two 8-port Digiboard PC/Xe serial port cards on your ISIVR 2.2 system. You can also have a 16-port Digiboard PC/Xem.

Note: The PC/Xe and PC/Xem cards cannot reside on the same system.

The first PC/Xe card is configured at the factory. You must install and configure the second PC/Xe card at your site.

Starting the configuration

To configure the second 8-port Digiboard PC/Xe serial port card, follow these steps.

Step	Action
1	Ensure that the second PC/Xe card is properly installed. ***Note:*** For more information, refer to "Installing the second PC/Xe card" on page 3-35.
2	If required, turn on the application processor.
3	At the boot prompt, press Enter.

4	Wait for this message to appear:
	`INIT: SINGLE USER MODE`
	`Type CONTROL-d to proceed with normal startup (or give root password for system maintenance):`

5	Press Ctrl-d. ***Result:*** The time prompt appears.
6	Press Enter. ***Result:*** The SCO logo appears.

Step	Action
7	At the login prompt, type **root** ***Result:*** The SCO logo appears.
8	At the password prompt, type **root1** ***Result:*** The # prompt appears.
9	At the # prompt, type **mpi** to start the MenuPort Interface utility. ***Result:*** A Restricts Rights Legend appears.
10	Press Enter. ***Result:*** The MenuPort Interface main menu appears.
11	Select Config. ***Result:*** The Config menu appears.
12	Select Change. ***Result:*** The pick list appears.
13	Go to "Continuing the configuration" on page 4-26.

Continuing the configuration

To continue the configuration procedure, follow these steps.

Step	Action
1	Complete "Starting the configuration" on page 4-25.
2	From the pick list, select Digi AccelePort Xe Family. ***Result:*** The Board Configuration screen appears.
3	In the *Total number of boards to be installed* field, press F2 and select 2. ***Note:*** You can simultaneously install one or two PC/Xe cards on the system. Only one serial board is configured at the factory.
4	Press F3.
5	In the *Board Type* field, select Digi_AccelePort_8e_ISA (EIA-232/RS-422).

Step	Action
6	In the *I/O Address* field, select 0x320.
7	In the *Memory Address* field, select 0x0D0000.
8	Go to "Completing the configuration" on page 4-27.

Completing the configuration

To complete the serial card configuration, follow these steps.

Step	Action
1	Complete "Continuing the configuration" on page 4-26.
2	Press F5. ***Result:*** The Dscreen/Altpin screen appears.
3	In the *Do you wish to install DigiScreen?* field, select No.
4	On the Dscreen/Altpin screen, press F5 to rebuild the kernel.
5	Wait for the following message to appear: `Press any key to continue.`
6	Wait for the following message to appear: `Do you want to rebuild the kernel now (y/n)?`
7	Type **y**
8	Wait for the following message to appear: `Do you really want to rebuild the kernel now (y/n)?`
9	Type **y**
10	Wait for the following message to appear: `Press any key to continue.`
11	Press any key. ***Result:*** The Config menu appears.

Step	Action
12	Press Escape. ***Result:*** The MenuPort Interface main menu appears.
13	Press Escape to quit the MenuPort Interface utility. ***Result:*** The # prompt appears.
14	At the # prompt, reboot the system by typing **shutdown -y -g0**
15	Press any key to restart the system.

Configuring the LAN IP address

Introduction

If your system has a LAN card, you must configure the IP address.

This section provides the procedures to configure three types of LAN cards:

- 3COM EtherLink XL PCI (3c900b)
- ZNYX Ethernet card
- Madge Token Ring card

Note: If your system does not have a LAN card, refer to "Configuring a system without a LAN card" on page 4-36.

Logging in to the SCO operating system

To begin to configure a LAN IP address, you must follow these steps to log in to the SCO operating system.

Step	Action
1	If required, turn on the application processor.
2	At the boot prompt, press Enter.
3	Press Ctrl-d. ***Result:*** The time prompt appears.
4	Press Enter. ***Result:*** The SCO logo appears.
5	At the login prompt, type **root**
6	At the password prompt, type **root1** ***Result:*** The # prompt appears.

Configuring a 3COM card

To configure a system with a 3COM EtherLink XL PCI (3c900b) card, follow these steps.

Step	Action
1	Complete the procedure called "Logging in to the SCO operating system" on page 4-29.
2	In the UNIX shell, type **netconfig** ***Result:*** The Network Configuration Manager appears.

3	From the Hardware menu, select Add new LAN adapter.
	Result: The following message appears:
	`The following adapters have been found:`
	`3COM Etherlink XL PCI (3C900) - PCI Bus - Device 13,Function 0`

4	Select Continue. ***Result:*** The Add Product screen appears.
5	Select SCO TCP/IP.
6	Select Add. ***Result:*** The SCO TCP/IP Configuration screen appears.
7	Go to "Configuring the SCO TCP/IP" on page 4-33.

Configuring a ZNYX card

To configure a system with a ZNYX card, follow these steps.

Step	Action
1	Complete the procedure described in "Logging in to the SCO operating system" on page 4-29.
2	In the UNIX shell, type **netconfig** ***Result:*** The Network Configuration Manager appears.

3	From the Hardware menu, select Add new LAN adapter.
	Result: The following message appears:
	`The following adapters have been found:`
	`Digital Semiconductor 21040 based Ethernet Controller - PCI Bus # 0, PCI Device # 13,PCI Function # 0`

4	Select Configure hardware not listed above.
5	Select Digital Semiconductor 2104x Ethernet Controller.
6	Select Continue. ***Note:*** The Network Driver Configuration window appears.
7	Set the values in the Network Driver Configuration to PCI Bus # 0, PCI Device # 13, PCI Function # 0.
8	Click OK.
9	Click OK.
10	Select SCO TCP/IP.
11	Select Add.
12	Configure the SCO TCP/IP. ***Note:*** For more information, refer to the procedure called "Configuring the SCO TCP/IP" on page 4-33.

Configuring a Madge Token Ring card

To configure a system with a Madge Token Ring card, follow these steps.

Step	Action
1	Complete the procedure called "Logging in to the SCO operating system" on page 4-29.
2	In the UNIX shell, type **netconfig** ***Result:*** The Network Configuration Manager appears.
3	From the Hardware menu, select Add new LAN adapter. ***Result:*** The Add New LAN Adapter screen appears.
4	Select Madge Smart AT Plus Adapter.
5	Select Continue. ***Result:*** The following message appears: `Do you wish to search for a Madge Smart AT Plus Adapter.`
6	Select Yes. ***Result:*** The following message appears: `The following adapters have been found: Madge Smart AT Plus Adapter - IO location 1a20`
7	Select Continue.
8	For Data Transfer Node, select DMA.
9	Select Advanced Options.
10	Set the interrupt vector to 10.
11	Set DMA channel to 6.
12	Select OK.
13	Select OK.
14	Select OK.
15	Select SCO TCP/IP.

Step	Action
16	Select Add.
17	Configure the SCO TCP/IP. ***Note:*** For more information, refer to "Configuring the SCO TCP/IP" on page 4-33.

Configuring the SCO TCP/IP

Before you configure the SCO TCP/IP, you must know the following:

- Do not change the *Local Host Name* from isivr22.
- After you enter information in a field, press Enter (not the Tab key). This ensures that the information is set properly.

To configure the SCO TCP/IP, follow these steps.

Step	Action

1	On the SCO TCP/IP Configuration screen, complete the following values x, y, and z with the customer-specific information.
	`Local Host Name: isivr22`
	`IP Address: xx.xxx.x.xx`
	`Netmask: xxx.xxx.xxx.x`
	`Broadcast Address: xx.xxx.xx.xx.x`
	`Domain Name: xyz.com`
	`TCP Connections: 1024`
	`Pseudo ttys: 64`

2	Select OK. ***Result:*** The Configure Networking Product screen appears.
3	Select OK. ***Result:*** The Network Configuration Manager appears.

Step	Action
4	Select Hardware.
5	From the Hardware menu, select Exit. ***Result:*** The following message appears: `The UNIX kernel must be re-linked before the changes made here will have an effect. Do you want to re-link the kernel now?`
6	Select Yes.
7	Wait for the following message to appear: `Do you want this kernel to boot by default.`
8	Type **Y** ***Result:*** The following message appears: `Do you want the kernel environment rebuilt? (y/n)?`
9	Type **Y**
10	Wait for the following message to appear: `Press Enter to continue.`
11	Press Enter. ***Result:*** The system returns you to the # prompt at the UNIX shell.
12	If your network card has previously been configured, use the nedit or vi editor to remove the old IP address from the /etc/hosts file. ***Note:*** For more information, refer to "Removing the old IP address" on page 4-35.

Removing the old IP address

If your network card has previously been configured, two IP entries appear in the /etc/hosts file. One entry is the old IP address and the other entry is the new IP address.

You must use the nedit or vi editor to remove the line containing the old IP address.

This table provides an example of how the /etc/hosts file appears with and without the old IP address.

If your hosts file looks similar to this before the IP address is changed	`# @(#)hosts,v 6.1 1993/08/21 02:17:48 stevea Exp - STREAMware TCP/IP source`
	`# SCCS IDENTIFICATION`
	`127.0.0.1 localhost`
	`xx.xxx.xx.xx isivr22 isivr22.nt.com`

And it appears similar to this after the IP address is changed	`# @(#)hosts,v 6.1 1993/08/21 02:17:48 stevea Exp - STREAMware TCP/IP source`
	`# SCCS IDENTIFICATION`
	`127.0.0.1 localhost`
	`xx.xxx.xx.xx isivr22 isivr22.nt.com`
	`yy.yyy.yy.yyisivr22 isivr22.nt.com`

Then, you must remove the line contatining the old IP address so the file appears similar to this	`# @(#)hosts,v 6.1 1993/08/21 02:17:48 stevea Exp - STREAMware TCP/IP source`
	`# SCCS IDENTIFICATION`
	`127.0.0.1 localhost`
	`yy.yyy.yy.yyisivr22 isivr22.nt.com`

Configuring a system without a LAN card

If your system does not have a LAN card, follow these steps.

Step	Action
1	At the # prompt, type **cp /etc/hosts /etc/hosts.old** ***Note:*** This makes a copy of the file.
2	Activate your nedit or vi editor on the /etc/hosts file.
3	After the comments, type **127.0.0.1 localhost loopback isivr22 isivr22.nt.com**

Backing up and restoring the Express database

Introduction

An optional host connectivity package, called Express, may be installed on your Meridian IVR 2.x system. This application allows Meridian IVR 2.x and ISIVR 2.2 to emulate the IBM 3270/SNA system and the IBM 5250/SNA system.

If your system uses Express 3270 or Express 5250 host emulation, you must back up and restore the Express database. This is done when you upgrade from the Meridian IVR 2.x to ISIVR 2.2 system. By backing up and restoring the database, you avoid a lengthy reconfiguration process.

Detecting Express

To determine if you have the Express application, follow these steps on your Meridian IVR 2.x system.

Step	Action
1	Log in as **root** with a password of **root1**
2	At the # prompt, type **kccheck** ***Result:*** A list of your system's options appears on the screen.
3	Check to see whether one of the following fields is set to yes: • *3270 SNA host connectivity* • *3270 QLLC host connectivity* • *5250 emulation* ***Note:*** If one or more of these fields is set to yes, the Express application is available on your system.

Backing up Express

To back up the Express database on your Meridian IVR 2.x system, follow these steps.

Step	Action
1	Complete "Detecting Express" on page 4-37.
2	On your Meridian IVR 2.x system, shut down Express by typing **express_adm stop**
3	Start the Administration Utility by typing **express_adm admin** ***Result:*** The Express Administration screen appears.
4	Select Backup EXPRESS Database.
5	Select Configuration.
6	Press Enter to confirm the selection.
7	For the backup destination, select Diskette.
8	Insert a 3.5 inch disk into the floppy drive.
9	To continue, type **y**
10	When the backup finishes, press Enter. ***Result:*** The Express Administration screen appears.
11	To exit, type **q**
12	Remove the disk and label it as "MIVR 2.08 Express Database, as of <Date>".

Restoring the Express database

To restore the Express database on your ISIVR 2.2 system, follow these steps.

Step	Action
1	Complete "Detecting Express" on page 4-37.
2	Obtain the 3.5 inch disk that contains the backup of the Express database. ***Note:*** This is the backup disk created in "Backing up Express" on page 4-38.
3	On your ISIVR 2.2 system, shut down Express by typing **express_adm stop**
4	Start the Administration Utility by typing **express_adm admin** ***Result:*** The Express Administration screen appears.
5	Select Restore EXPRESS Database.
6	For the restore source, select Diskette.
7	Insert the Express database backup disk into the floppy drive.
8	To continue, type **y**
9	Wait for this message to appear: `Which Components Do You Want To Restore?`
10	Select Configuration and press Enter.
11	Wait for this message to appear: `Do You Want to Reset the Components Which Were Not Restored?`
12	Type **n** ***Result:*** The backup files are restored.
13	When the restore process finishes, press Enter. ***Result:*** The Express Administration screen appears.
14	To exit, type **q**
15	Remove the disk.

Step	Action
16	Reboot the system by typing **shutdown -y -g0**

17	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

18	Press any key to reboot.
19	Go to "Editing the Express Startup file" on page 4-40.

Editing the Express Startup file

After restoring the Express database, you must edit the Express Startup file on the ISIVR 2.2 system.

To edit the Express Startup file, follow these steps.

Step	Action
1	Complete "Restoring the Express database" on page 4-39.
2	Activate your nedit or vi editor on the /etc/rc2.d/S99express file.
3	At the end of the file, type **su root -c "/u/ivr/sys_files/vtekhost_adm"**

Updating node and link definitions

After restoring the Express database on the ISIVR 2.2, you must update the node and link definitions to accommodate the new system name.

To update the node and link definitions, follow these steps.

Step	Action
1	Turn on the application processor.

Step	Action
2	At the boot prompt, press Enter.

3	Wait for this message to appear:
	`INIT: SINGLE USER MODE`
	`Type CONTROL-d to proceed with normal startup (or give root password for system maintenance):`

4	Press Ctrl-d. ***Result:*** The time prompt appears.
5	Press Enter. ***Result:*** The SCO logo appears.
6	At the login prompt, type **root** ***Result:*** The Password prompt appears.
7	At the Password prompt, type **root1** ***Result:*** The # prompt appears.
8	In the UNIX shell, type **. /etc/profile** ***Note:*** Be certain to include a blank space between the period and /etc.
9	Type **express -u express** ***Result:*** The Express Manager window appears.
10	Select Server Configuration. ***Result:*** The Server Configuration window appears.
11	Select Define Hardware. ***Result:*** The Define Hardware window appears.
12	Select the entry that has a type of “System” and a name that matches the old system name used in your Meridian IVR 2.x system.
13	From the Profile menu, select Delete.
14	From the Profile menu, select Exit. ***Result:*** The Define Hardware window closes.

Step	Action
15	From the Server Configuration window, select Define Communications. ***Result:*** The Select Display window appears.
16	Select SNA. ***Result:*** The Define Communications - SNA window appears.
17	Double-click the entry containing a type of "Node".
18	In the window that appears, change the entry in the *Process...* field to **isivr22.kernel**
19	Select OK. ***Result:*** The Define Communications - SNA window appears.
20	Double-click the entry containing a type of "Link". ***Result:*** A window appears.
21	If you have an Arnet Sync/570 board, change the entry in the *Ports...* field to **isivr22.hpa0.0** If you are using another port, change the entry in the *Ports...* field to **isivr22.hpa0.1** If you have a Madge Token Ring board, change the entry in the *Port...* field to **isivr22.tr**
22	Select OK.
23	From the Profile menu in the Define Communications - SNA window, select Exit.
24	From the File menu in the Server Configuration window, select Exit Window.
25	From the File menu in the Express Manager window, select Exit Express.
26	In the window that appears, select Exit.

Chapter 5

Expanding and replacing components

In this chapter

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Overview

Introduction

This chapter describes how to expand or replace the components in your ISIVR 2.2 system.

You can expand your ISIVR 2.2 system by

- installing a new feature through the keycode option
- activating the SCO Development System
- upgrading from a PC/Xe serial board to a PC/Xem serial board
- installing an Ethernet LAN card

Using the keycode option

Introduction

One method of adding features to your ISIVR 2.2 system is to activate a keycode option supplied by your Nortel Networks representative.

The features are already installed on your system and no new installation media is required.

Using the keycode option

To activate a feature, follow these steps.

Step	Action
1	Contact your Nortel Networks representative for the keycode that corresponds to the feature you wish to install.
2	Perform a full system backup of your ISIVR 2.2 system. ***Note:*** For more information, refer to "Performing a full system backup" on page 8-3.
3	If necessary, install any hardware corresponding to your new feature.
4	Install the ISIVR 2.2 application software. ***Note:*** For more information, refer to "Installing the application software" on page 6-18.

Activating the SCO Development System

Introduction

The SCO Development System allows you to upgrade from a Run-time system to a Development system.

Activating the SCO Development System

To activate the SCO Development System, follow these steps.

Step	Action
1	Perform a full system backup of your ISIVR 2.2 system. ***Note:*** For more information, refer to "Performing a full system backup" on page 8-3.
2	Obtain a development license from your Nortel Networks representative.
3	Activate the SCO Development System. ***Note:*** For more information, refer to "Activating the SCO Development System" on page 6-11.

Upgrading from PC/Xe to PC/Xem

Introduction

If your system has 8-port Digiboard PC/Xe card(s), you can replace them with one 16-port Digiboard PC/Xem card.

Replacing the hardware

To replace the PC/Xe card(s) with a PC/Xem card, follow these steps.

Step	Action
1	If the system is on, go to the # prompt and type **shutdown -y -g0**

2	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

3	Turn the system off.
4	Remove the PC/Xe card(s).
5	Install the PC/Xem card. ***Note:*** For more information, refer to "Installing the PC/Xem card" on page 3-31.
6	Go to "Uninstalling the PC/Xe board" on page 5-5.

Uninstalling the PC/Xe board

To uninstall the PC/Xe board, follow these steps.

Step	Action
1	Complete "Replacing the hardware" on page 5-5.
2	If required, turn on the application processor.
3	At the boot prompt, press Enter.

Step	Action

4	Wait for this message to appear:
	`INIT: SINGLE USER MODE`
	`Type CONTROL-d to proceed with normal startup (or give root password for system maintenance):`

5	For the root password, type **root1** ***Result:*** The system displays the following message: `Entering System Maintenance Mode.`
6	At the # prompt, type **mpi** to start the MenuPort Interface utility. ***Result:*** A Restricts Rights Legend appears.
7	Press Enter. ***Result:*** The MenuPort Interface main menu appears.
8	Highlight Config – Install, Change, and Remove.
9	Press Enter.
10	Select Remove – Remove Installed Products and press Enter.
11	When the Pick List – Digi AccelePort Xe family appears, press Enter.
12	In the *Are you sure you want to remove all Digi AccelePort Xe boards?* field, type **y**
13	Wait for the following message to appear: `Do you want to rebuild the kernel now (y/n)?`
14	Type **y**
15	Wait for the following message to appear: `Do you really want to rebuild the kernel now (y/n)?`
16	Type **y**
17	Wait for the following message to appear: `Press any key to continue.`

Step	Action
18	Press any key. ***Result:*** The Config menu appears.
19	Press Escape several times to return to the # prompt.
20	Reboot the system.
21	Go to "Starting the PC/Xem configuration" on page 5-7.

Starting the PC/Xem configuration

To configure the PC/Xem card, follow these steps.

Step	Action
1	If required, turn on the application processor.
2	At the boot prompt, press Enter.

3	Wait for this message to appear:
	`INIT: SINGLE USER MODE`
	`Type CONTROL-d to proceed with normal startup (or give root password for system maintenance):`

4	Press Ctrl-d. ***Result:*** The time prompt appears.
5	Press Enter. ***Result:*** The SCO logo appears.
6	At the login prompt, type **root** ***Result:*** The SCO logo appears.
7	At the password prompt, type **root1** ***Result:*** The # prompt appears.
8	At the # prompt, type **mpi** to start the MenuPort Interface utility. ***Result:*** A Restricts Rights Legend appears.

Step	Action
9	Press Enter. ***Result:*** The MenuPort Interface main menu appears.
10	Select Config. ***Result:*** The Config menu appears.
11	Select Install. ***Result:*** The pick list appears.
12	From the pick list, select Digi AccelePort EPC/X, C/X and Xem Family. ***Result:*** A screen of serial card options appears.
13	In the *Total number of boards to be installed field,* type **1** ***Note:*** You can install only one PC/Xem card on the system.
14	In the *Adapter Type* field, select Digi_AccelePort_Xem_ISA.
15	In the *I/O Address* field, select 0x304.
16	In the *Memory Address* field, select 0x000D0000.
17	Press F5. ***Result:*** The Basic Configuration screen appears.
18	From the PORTS Module 1 option, select PORTS/16em.
19	Go to “Continuing the PC/Xem configuration” on page 5-9.

Continuing the PC/Xem configuration

To continue the PC/Xem configuration, follow these steps.

Step	Action
1	Complete "Starting the PC/Xem configuration" on page 5-7.
2	Press F5. ***Result:*** The Dscreen/Altpin screen appears.
3	In the *Do you wish to install DigiScreen?* field, select No.
4	On the Dscreen/Altpin screen, press F5 to rebuild the kernel.
5	Wait for the following message to appear: `Do you want to rebuild the kernel now (y/n)?`
6	Type **y**
7	Wait for the following message to appear: `Do you really want to rebuild the kernel now (y/n)?`
8	Type **y**
9	Wait for the following message to appear: `Press any key to continue.`
10	Press any key. ***Result:*** The Config menu appears.
11	Press Escape. ***Result:*** The MenuPort Interface main menu appears.
12	Press Escape to quit the MenuPort Interface utility. ***Result:*** The # prompt appears.
13	At the # prompt, reboot the system by typing **shutdown -y -g0**

Step	Action

14	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

15	Reboot the system.
16	Go to "Completing the PC/Xem configuration" on page 5-10.

Completing the PC/Xem configuration

To complete the PC/Xem card, follow these steps.

Step	Action
1	Complete "Continuing the PC/Xem configuration" on page 5-9.
2	Log in to the system.
3	Use the nedit or vi editor to edit the /u/ivr/vrs/exe/lh.config file with the following information: Device1=/dev/ttya01 Device2=/dev/ttya02 Device3=/dev/ttya03 Device4=/dev/ttya04 Device5=/dev/ttya05 Device6=/dev/ttya06 Device7=/dev/ttya07 Device8=/dev/ttya08
4	Ensure that any linkspeed settings in the old lh.config file are retained in the new lh.config file. ***Note:*** For more information, refer to "Configuring a PC/Xe or PC/Xem card" on page 6-13.

Step	Action
5	If your system has the Uninterruptible Power Supply (UPS) option, use the nedit or vi editor to edit the /usr/lib/powerchute/powerchute.ini to replace both occurrences of ttyi1g with ttya07. ***Note:*** For more information on UPS, refer to Chapter 10, "Using the Uninterruptible Power Supply option".
6	At the # prompt, reboot the system by typing **shutdown -y -g0**

7	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

8	Reboot the system.

Installing a new Ethernet card

Introduction

If your ISIVR 2.2 system does not have a network card, you can install the 3COM EtherLink XL PCI (3c900b).

Installing the card

To install this card, refer to "Installing the Ethernet card" on page 3-29 and "Configuring the LAN IP address" on page 4-29.

Restoring the host file

If you performed the procedure described in "Configuring a system without a LAN card" on page 4-36, you must restore the previous version of the hosts file that you saved as /etc/hosts.old.

To restore the hosts file, follow these steps..

Step	Action
1	At the # prompt, type **cp /etc/hosts /etc/hosts.again** ***Note:*** This makes a backup of the current hosts file.
2	Type **cp /etc/hosts.old /etc/hosts** ***Result:*** The previous hosts file is restored.
3	Install the new Ethernet card.

Chapter 6

Installing or reinstalling new software

In this chapter

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Section B: Detailed procedures 6-7

Overview

Introduction

Consult this chapter if you want to install or reinstall the ISIVR 2.2 software from the original media. You may want to do this for the following reasons:

- You need to reinstall the software but you do not have a backup.
- ISIVR 2.2 software was not preloaded on your hard drive.

Obtaining the installation media

To perform a new software installation, you need the installation media described in "Packaging checklist for 2.x to 2.2 upgrade" on page 2-6.

Section A: Start here

In this section

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Overview

Introduction

This section provides a summary of the procedures you must follow to install or reinstall the ISIVR 2.2 software.

Installing or reinstalling the software

Introduction

This section provides a high-level road map of the steps you must follow to install or reinstall the software at your site.

Summarizing the software installation process

To install or reinstall the software, follow these steps.

Step	Action
1	Perform a full system backup, if applicable. ***Note:*** For more information, refer to "Performing a full system backup" on page 8-3.
2	Ensure that the keylock is firmly attached. ***Note:*** For more information, refer to "Attaching the security keylock" on page 3-28.
3	Ensure that all required hardware is installed. ***Note:*** For more information, refer to Chapter 3, "Upgrading the hardware."
4	Verify the BIOS. ***Note:*** For more information, refer to "Verifying the BIOS version" on page 4-13.
5	Perform the System Configuration Utility (SCU) activities. ***Note:*** For more information, refer to "Upgrading the SCU" on page 4-16.
6	Install the SCO operating system. ***Note:*** For more information, refer to "Installing the operating system" on page 6-9.
7	Install the software fixes, if applicable. ***Note:*** For more information, refer to "Installing the PEPs" on page 6-23.

Step	Action
8	If you purchased the SCO Development System, activate it. ***Note:*** For more information, refer to "Activating the SCO Development System" on page 6-11.
9	Configure the PC/Xem card or the first PC/Xe card. ***Note:*** For more information, refer to "Configuring a PC/Xe or PC/Xem card" on page 6-13.
10	Install the application software. ***Note:*** For more information, refer to "Installing the application software" on page 6-18.
11	Install the software fixes, if applicable. ***Note:*** For more information, refer to "Installing the PEPs" on page 6-23.
12	If applicable, configure the second PC/Xe card. ***Note:*** For more information, refer to "Configuring the second PC/Xe card" on page 4-25.
13	Configure the IP address. ***Note:*** For more information, refer to "Configuring the LAN IP address" on page 4-29.
14	If applicable, activate the Host Connectivity option to interface with several types of host computers. ***Note:*** For more information, refer to "Adding a new host adapter" on page 6-25.
15	Convert the applications. ***Note:*** For more information, refer to Chapter 7, "Transferring and converting files."
16	Enable the Meridian Mail console connection. ***Note:*** For more information, refer to "Enabling the Meridian Mail console connection" on page 6-28.
17	Perform a full system backup, if applicable. ***Note:*** For more information, refer to "Performing a full system backup" on page 8-3.

Section B: Detailed procedures

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Overview

Introduction

This section provides the detailed procedures required to perform a new software installation.

Note: To follow the procedures in the correct order, refer to Section A, "Start here," on page 6-3.

Installing the operating system

Introduction

To install the SCO Operating System, you must have the following floppy disks and CD-ROM:

- Symposium Integrated IVR 2.2 OS & Application CD 1/1
- Symposium Integrated IVR 2.2 Boot Diskette 1/1 - CD Installation/Tape Recovery
- Symposium Integrated IVR 2.2 Root Diskette 1/1 - CD Installation/Tape Recovery

Installing the system

To install the SCO Operating System, follow these steps.

Step	Action
1	If the system is on, go to the # prompt and type **shutdown -y -g0**

2	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

3	Turn the system off.
4	Insert the disk labeled "Symposium Integrated IVR 2.2 Boot Diskette 1/1 - CD Installation/Tape Recovery."
5	Power up the system.
6	Wait for the boot prompt to appear.
7	Insert the CD-ROM labeled "Symposium Integrated IVR 2.2 OS & Application CD 1/1."
8	At the boot prompt, press Enter. ***Result:*** The system loads the kernel information.

Step	Action
9	When prompted, remove the disk labeled "Symposium Integrated IVR 2.2 Boot Diskette 1/1 - CD Installation/Tape Recovery."
10	Insert the disk labeled "Symposium Integrated IVR 2.2 Root Diskette 1/1 - CD Installation/Tape Recovery."
11	Press Enter.

12	Wait for this menu to appear:
	`ISIVR 2.2 Installation`
	`Choose your installation media type:`
	`1) CDROM`
	`2) Tape Drive`
	`3) Quit`
	`#?`

13	Type **1** to select CD-ROM. ***Result:*** After you install the operating system, the following message appears: "`Hard drive successfully restored.`"

14	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

15	Remove the Symposium Integrated IVR 2.2 Root Diskette 1/1 - CD Installation Tape/Recovery disk from the floppy drive.
16	Leave the Symposium Integrated IVR 2.2 OS & Application CD 1/1 CD-ROM in the CD-ROM drive. ***Note:*** Leave the CD-ROM in the drive until you complete "Installing the application software" on page 6-18.
17	Press Enter to reboot the system.
18	Install any software fixes, if necessary. ***Note:*** For more information, refer to "Installing the PEPs" on page 6-23.

Activating the SCO Development System

Introduction

During the operating system installation, an unlicensed SCO development package is installed by default. This package is an optional component that can be purchased through Nortel Networks.

If you want to activate the SCO development package, you must enter the license code. You do this through the SCO License Manager, which is described in this section.

Entering the license code

To activate the SCO Development System, follow these steps.

Step	Action
1	Insert the Symposium Integrated IVR 2.2 OS & Application CD 1/1 CD-ROM in the CD-ROM drive.
2	Turn on the application processor.
3	At the boot prompt, press Enter.

4	Wait for this message to appear:
	`INIT: SINGLE USER MODE`
	`Type CONTROL-d to proceed with normal startup (or give root password for system maintenance):`

5	Press Ctrl-d. ***Result:*** The time prompt appears.
6	Press Enter. ***Result:*** The SCO logo appears.
7	To enter text mode, press Ctrl-ALT-F1 simultaneously. ***Result:*** The login prompt appears.
8	At the login prompt, type **root** ***Result:*** The Password prompt appears.

Step	Action
9	At the Password prompt, type **root1** ***Result:*** The # prompt appears.
10	At the # prompt, type **scoadmin lic** ***Result:*** The License Manager on ISIVR22 screen appears.
11	Select SCO OpenServer Development System.
12	Select License.
13	Select License Product.
14	Type the license number, license code, and license data. ***Note:*** This information is available on the SCO development certificate that you received with your ISIVR 2.2 system.
15	Select OK.
16	Select License.
17	Select Exit. ***Result:*** The # prompt appears.
18	At the # prompt, type **shutdown -y -g0** ***Result:*** The system reboots.
19	Press any key to restart the system.

Configuring a PC/Xe or PC/Xem card

Introduction

This section describes the procedures you must follow to configure the 16-port Digiboard PC/Xem or the first 8-port Digiboard PC/Xe serial port card.

The serial cards are installed in your ISIVR 2.2 system in one of the following ways:

- one 8-port Digiboard PC/Xe serial port card
- two 8-port Digiboard PC/Xe serial port cards
- one 16-port Digiboard PC/Xem serial port cards

Note: A PC/Xe and a PC/Xem serial board cannot coexist on the same system.

Migrating from Meridian IVR 1.x

If you are reinstalling your software, you must reconfigure the PC/Xem card. For more information, go to "Configuring the PC/Xem card" on page 6-15.

Upgrading from Meridian IVR 2.x

If you are upgrading from Meridian IVR 2.x, you can have one or two 8-port Digiboard PC/Xe serial port cards on your ISIVR 2.2 system.

If you are reinstalling your software, you must reconfigure the first PC/Xe card. For more information, go to "Configuring the first PC/Xe card" on page 6-15.

Note: It is not necessary to configure the second PC/Xe card at this time.

Starting the configuration

To configure your 16-port Digiboard PC/Xem or your first 8-port Digiboard PC/Xe serial port card, follow these steps.

Step	Action
1	If required, turn on the application processor.
2	At the boot prompt, press Enter.

3	Wait for this message to appear:
	`INIT: SINGLE USER MODE`
	`Type CONTROL-d to proceed with normal startup (or give root password for system maintenance):`

4	For the root password, type **root1** ***Result:*** The system displays the following message: `Entering System Maintenance Mode.`
5	At the # prompt, type **mpi** to start the MenuPort Interface utility. ***Result:*** A Restricts Rights Legend appears.
6	Press Enter. ***Result:*** The MenuPort Interface main menu appears.
7	Select Config. ***Result:*** The Config menu appears.
8	Select Install. ***Result:*** The pick list appears.
9	If you are configuring a PC/Xe card, go to "Configuring the first PC/Xe card" on page 6-15. If you are configuring a PC/Xem card, go to "Configuring the PC/Xem card" on page 6-15.

Configuring the first PC/Xe card

A PC/Xe serial card is installed and configured when your ISIVR 2.2 is assembled at the factory. If you need to reconfigure this card, follow these steps.

Step	Action
1	Complete "Starting the configuration" on page 6-14.
2	From the pick list, select Digi AccelePort Xe Family. ***Result:*** The Board Configuration screen appears.
3	In the *Total number of boards to be installed* field, type **1**
4	In the *Current Board* field, select the board to be configured. ***Note:*** This option appears only if two PC/Xe cards are being installed.
5	In the *Board Type* field, select Digi_AccelePort_8e_ISA (EIA-232/RS-422).
6	In the *I/O Address* field, select 0x300.
7	In the *Memory Address* field, select 0x0D0000.
8	Go to "Completing the serial card configuration" on page 6-16.

Configuring the PC/Xem card

To configure the DigiBoard PC/Xem serial card, follow these steps.

Step	Action
1	Complete "Starting the configuration" on page 6-14.
2	From the pick list, select Digi AccelePort EPC/X, C/X and Xem Family. ***Result:*** A screen of serial card options appears.
3	In the *Total number of boards to be installed field,* type **1** ***Note:*** You can install only one PC/Xem card on the system.
4	In the *Adapter Type* field, select Digi_AccelePort_Xem_ISA.
5	In the *I/O Address* field, select 0x304.

Step	Action
6	In the *Memory Address* field, select 0x000D0000.
7	Press F5. ***Result:*** The Basic Configuration screen appears.
8	From the PORTS Module 1 option, select PORTS/16em.
9	Go to "Completing the serial card configuration" on page 6-16.

Completing the serial card configuration

To complete the serial card configuration, follow these steps.

Step	Action
1	Complete "Configuring the first PC/Xe card" on page 6-15, or "Configuring the PC/Xem card" on page 6-15.
2	Press F5. ***Result:*** The Dscreen/Altpin screen appears.
3	In the *Do you wish to install DigiScreen?* field, select No.
4	On the Dscreen/Altpin screen, press F5 to rebuild the kernel.
5	Wait for the following message to appear: `Press any key to continue.`
6	Wait for the following message to appear: `Do you want to rebuild the kernel now (y/n)?`
7	Type **y**
8	Wait for the following message to appear: `Do you really want to rebuild the kernel now (y/n)?`
9	Type **y**
10	Wait for the following message to appear: `Press any key to continue.`

Step	Action
11	Press any key. ***Result:*** The Config menu appears.
12	Press Escape. ***Result:*** The MenuPort Interface main menu appears.
13	Press Escape to quit the MenuPort Interface utility. ***Result:*** The # prompt appears.
14	At the # prompt, reboot the system by typing **shutdown -y -g0**

15	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`
	Note: If you are installing or reinstalling software, do not reboot the system at this point. The system is rebooted during the procedure described in "Installing the application software" on page 6-18.
	Note: If you are expanding your system by following "Upgrading from PC/Xe to PC/Xem" on page 5-5, you can reboot the system at this point.

Installing the application software

Introduction

To complete the process of installing the new software, you must install the application software.

Selecting a rebooting method

Before you install the application software, you must reboot the system. Based on the current status of your system, you must select one of three methods to reboot it:

- Method 1: Rebooting if the system is powered down.
- Method 2: Rebooting if the Safe to Power Off message appears and the system is on.
- Method 3: Rebooting if the system is on and the Safe to Power Off message does not appear.

Method 1

If your system is currently powered down, follow this step to reboot.

Step	Action
1	If your system is currently powered down, power it up and proceed to "Installing the software" on page 6-20.

Method 2

If the system is on and the Safe to Power Off message appears on the screen, follow these steps to reboot.

Step	Action

1	If your system is on, check whether the following message appears on your screen:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

2	Press any key to reboot and proceed to "Installing the software" on page 6-20.

Method 3

If the system is on and the Safe to Power Off message does not appear on the screen, follow these steps to reboot.

Step	Action
1	If the system is on and the Safe to Power Off message is not on the screen, go to the # prompt and type **shutdown -y -g0**

2	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

3	Press any key to reboot and proceed to "Installing the software" on page 6-20.

Installing the software

To install the ISIVR 2.2 application software, follow these steps.

Step	Action
1	Ensure that the security keylock is connected to the system. ***Note:*** For more information, refer to "Attaching the security keylock" on page 3-28.
2	Ensure the CD-ROM, labeled "Symposium Integrated IVR 2.2 OS & Application CD 1/1," is inserted in the system.

3	At the boot: prompt, press Enter.
	Result: The following message appears:
	`INIT: SINGLE USER MODE`
	`Type CONTROL-d to proceed with normal startup (or give root password for system maintenance):`

4	For the root password, type **root1** ***Result:*** The system displays the following message: `Entering System Maintenance Mode.`
5	At the # prompt, type **mountall**
6	At the # prompt, type **cd /u/tmp** ***Note:*** Be certain to insert a blank space between the "cd" and "/".
7	At the # prompt, type **./init.install** ***Note:*** Be certain to type a period (.) before the "/". ***Result:*** A message appears stating the conditions for IVR installation. You must meet the following conditions: • You are logged in as **root**. • The system is in single-user mode. • The CD is in the CD-ROM drive. ***Note:*** If any of these conditions are not met, a message appears and the installation program terminates. If the installation program terminates, repeat this procedure.

Step	Action
8	If the program continues, the following message appears: `Extracting installation script and files from CD.` ***Note:*** The extraction takes about three minutes.
9	Go to "Entering the keycode" on page 6-21.

Entering the keycode

To continue the software installation process, you must enter your keycode.

Note: The keycode is shipped from the factory with the software. If you are upgrading from Meridian IVR 2.x, the keycode should be identical for ISIVR 2.2. If it is different, notify your Nortel Networks service representative.

To enter the keycode, follow these steps.

Step	Action
1	Complete "Installing the software" on page 6-20.
2	Wait for the following message to appear: `Please enter your keycode or enter q to quit:`
3	Type the keycode for your IVR application configuration. ***Note:*** Do not type spaces within the keycode. The keycode is not case-sensitive. You have three chances to enter the keycode before the program terminates. If it terminates, start the procedure again beginning at Step 7 in "Installing the software" on page 6-20. ***Result:*** The list of options appears, followed by this prompt: `Please enter y to continue and n to abort (y/n)`
4	Review your options. ***Note:*** If you have any concerns regarding the options being displayed, contact your Nortel Networks representative.

Step	Action
5	Type **y** to continue with the installation. ***Result:*** The system displays the following message: `ISIVR Installation has successfully completed.`
6	At the # prompt, reboot the system by typing **shutdown -y -g0**
7	Press any key to restart the system.
8	Install the software fixes, if necessary. ***Note:*** For more information, refer to "Installing the PEPs" on page 6-23.

Installing the PEPs

Introduction

The Product Enhancement Packages (PEPs) are software fixes that your ISIVR 2.2 system may require. The PEPs are provided on the Symposium Integrated IVR 2.2 Release Supplement CD sent from the factory.

The PEPs are installed by the PEP Manager, which is preloaded on your ISIVR 2.2 system.

Note: Some PEPs may cause a running system to restart or shut down services. For more information, refer to the readme file in the root directory of the Release Supplement CD.

Installing the PEPs

To install the PEPs, follow these steps.

Step	Action
1	If required, turn on the application processor.
2	At the boot prompt, press Enter.

3	Wait for this message to appear:
	`INIT: SINGLE USER MODE`
	`Type CONTROL-d to proceed with normal startup (or give root password for system maintenance):`

4	Press Ctrl-d. ***Result:*** The time prompt appears.
5	Press Enter. ***Result:*** The SCO logo appears.
6	At the login prompt, type **root** ***Result:*** The SCO logo appears.
7	At the password prompt, type **root1** ***Result:*** The # prompt appears.

Step	Action
8	At the # prompt, type **# scoadmin PEP Manager** ***Result:*** The PEP Manager's System Configuration Window appears. ***Note:*** If the PEP Manager has been updated, the new version is automatically installed from the CD. The system also prompts you to re-run the scoadmin PEP Manager.
9	Install the applicable PEPs. ***Note:*** For further instructions on how to install the PEPs, use the PEP Manager online help.
10	At the # prompt, type **shutdown -y -g0** ***Result:*** The system shuts down.
11	Press any key to restart the system. ***Result:*** The system reboots.

Adding a new host adapter

Introduction

The Host Connectivity option allows you to use the ISIVR 2.2 system to interface with several types of host computers over a number of different network topologies.

If your system contains either a Madge Token Ring card or an Arnet Sync/570 card, you must perform the applicable procedure described in this section.

For more information on the Host Connectivity option, refer to the *Meridian IVR 3270 Gateway Development Guide* (NTP 555-9001-312), "Host connectivity" chapter, or the *Meridian IVR 5250 Gateway Development Guide* (NTP 555-9001-318), "Host connectivity" chapter.

Connecting the Arnet board

To connect the Arnet Sync/570 card, follow these steps.

Step	Action
1	At the # prompt, stop EXPRESS by typing **express_adm stop** ***Result:*** A message appears when the EXPRESS shutdown is complete.
2	At the # prompt, add the adapter by typing **express_adm admin** ***Result:*** The Express Administration menu appears.
3	Select Work with Communication Adapters. ***Result:*** The Work with Communication Adapters menu appears.
4	Select Add Communication Adapters. ***Result:*** The Add Communication Adapters menu appears.

Step	Action
5	Select Add HPA Adapter(s). ***Result:*** The Select HPA Adapter to Work with screen appears.
6	Select HPA SYNC/570 Board 0. ***Result:*** The Add HPA Adapter 0 screen appears.
7	In the *Select Set Interrupt Level* field, select 15.
8	In the *Set I/O Address*, field, select 340.
9	In the *Select Memory Address* field, select E0000.
10	Type **c** to exit from the menus until you return to the EXPRESS Administration menu.
11	Type **q** to exit from the EXPRESS Administration menu.
12	Reboot the system.
13	To configure EXPRESS, type **express -u express** ***Note:*** For more information on this step, refer to the *Meridian IVR 3270 Gateway Development Guide* (NTP 555-9001-312), "Host connectivity" chapter, on page B-28, or the *Meridian IVR 5250 Gateway Development Guide* (NTP 555-9001-318), "Host connectivity" chapter, on page B-5.

Connecting the Token Ring board

To connect the Token Ring card, follow these steps.

Step	Action
1	At the # prompt, stop EXPRESS by typing **express_adm stop** ***Result:*** A message appears when the EXPRESS shutdown is complete.
2	At the # prompt, add the adapter by typing **express_adm admin** ***Result:*** The Express Administration menu appears.

Step	Action
3	Select Work with Communication Adapters. ***Result:*** The Work with Communication Adapters menu appears.
4	Select Add Communication Adapters. ***Result:*** The Add Communication Adapters menu appears.
5	Select Add Madge Token Ring Adapter. ***Result:*** The Add Madge Adapter screen appears.
6	In the *Select Set Bus Type (AT, MC, EISA)* field, select AT.
7	In the *Select Set Interrupt Level* field, select 15.
8	In the *Select Set I/O Address* field, select 3A20.
9	In the Select Set DMA Channel field, select 5.
10	Type **c** to exit from the menus until you return to the EXPRESS Administration menu.
11	Type **q** to exit from the EXPRESS Administration menu.
12	Reboot the system.
13	To configure EXPRESS, type **express -u express** ***Note:*** For more information on this step, refer to the *Meridian IVR 3270 Gateway Development Guide* (NTP 555-9001-312), "Host connectivity" chapter, on page B-28, or the *Meridian IVR 5250 Gateway Development Guide* (NTP 555-9001-318), "Host connectivity" chapter, on page B-5.

Enabling the Meridian Mail console connection

Introduction

After the ISIVR 2.2 application files are installed, you must enable the Meridian Mail console connection. You do this by using the nedit or vi editor to change the settings in several files.

Enable the connection for a PC/Xe card

If you are using a PC/Xe card(s), follow these steps to enable the Meridian Mail console connection.

Step	Action
1	Back up these files: • /.mwmrc • /u/vad/.mwmrc • /u/admin/.mwmrc
2	Activate the nedit or vi editor.
3	Use the nedit or vi editor in the three files listed above to change all occurrences of "MM Console" ! "/usr/bin/X11/xterm +sb -n 'MMConsole' -title 'Meridian Mail Console' -e /usr/bin/ntcu -l/dev/ttyi1h -s9600 &" to "MM Console" ! "/usr/bin/X11/xterm +sb -n 'MMConsole' -title 'Meridian Mail Console' -e /usr/bin/cu -l/dev/ttyi1h -s9600 &" ***Note:*** The only difference is that /usr/bin/ntcu has been changed to /usr/bin/cu.
4	Ensure that the /usr/lib/uucp/Devices file contains the following line: Direct ttyi1h - 9600 direct ***Note:*** For a Meridian Mail system running at 2400 baud, replace 9600 with 2400.
5	To refresh the screen, type **Control W l F**

Step	Action
6	Use the middle mouse button to display the Restart Mwm menu and restart the Mwm window manager. ***Note:*** You can also restart the Mwm window manager by logging out of the system and logging back in. ***Result:*** A "`connected`" message appears in The MMConsole window when the Meridian Mail console is connected.

Enable the connection for a PC/Xem card

If you are using a PC/Xem card, follow these steps to enable the Meridian Mail console connection.

Step	Action
1	Back up these files: • /.mwmrc • /u/vad/.mwmrc • /u/admin/.mwmrc
2	Activate the nedit or vi editor.
3	Use the nedit or vi editor in the three files listed above to change all occurrences of "MM Console" ! "/usr/bin/X11/xterm +sb -n 'MMConsole' -title 'Meridian Mail Console' -e /usr/bin/ntcu -l/dev/tta08 -s9600 &" to "MM Console" ! "/usr/bin/X11/xterm +sb -n 'MMConsole' -title 'Meridian Mail Console' -e /usr/bin/cu -l/dev/tta08 -s9600 &" ***Note:*** The only difference is that /usr/bin/ntcu has been changed to /usr/bin/cu.
4	Ensure that the /usr/lib/uucp/Devices file contains the following line: Direct ttya08 - 9600 direct ***Note:*** For a Meridian Mail system running at 2400 baud, replace 9600 with 2400.

Step	Action
5	Use the middle mouse button to display the Restart Mwm menu and restart the Mwm window manager. ***Note:*** You can also restart the Mwm window manager by logging out of the system and logging back in.
6	Press Mouse Button 1 from the root window and select MM Console. ***Result:*** A "`connected`" message appears in The MMConsole window when the Meridian Mail console is connected.
7	To refresh the screen, type **Control W I F**

Chapter 7

Transferring and converting files

In this chapter

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Section B: Converting the files	7-9

Overview

Introduction

If you are upgrading your software or performing a new software installation, you must transfer and convert your application files to ISIVR 2.2.

Section A: Transferring the files

In this section

Overview	7-4
Transferring from 1.x using FTP	7-5
Transferring from 2.x using xbup	7-6

Overview

Introduction

To transfer the application files to ISIVR 2.2, you begin by transferring them from Meridian 1.x or Meridian IVR 2.x to ISIVR 2.2.

You can transfer files in one of two ways:

- file transfer program (for Meridian IVR 1.x files)
- xbup tool (for Meridian 2.x files)

Transferring from 1.x using FTP

Introduction

To transfer files from Meridian IVR 1.x to ISIVR 2.2, you should use the FTP function.

Transfer these files

You must transfer the following Meridian IVR 1.x files:

/user/vad
/user/admin
/user/ivr/data
/user/ivr/gen/3270
/user/ivr/gen/apps
/user/ivr/gen/exe/*.sai
/user/ivr/gen/log.d
/user/ivr/gen/usr/*.[ch]
/user/ivr/gen/sys_files/*.dbm
/user/ivr/gen/sys_files/*.tpl
/user/ivr/gen/sys_files/*.ext
/usr/comm/adm/3270/trs.*
/usr/comm/adm/sna/trs.csn

Note: Make note of the contents of your /user/ivr/vrs/exe/lh.config file. This may be helpful when you modify the /user/ivr/vrs/exe/lh.config file on the ISIVR 2.2.

Note: If you do not have the network capacity to transfer these files from your Meridian IVR 1.x system to your ISIVR 2.2 system, you must transfer the files to a system that is accessible to your ISIVR 2.2 system.

For more information

To use the FTP function, refer to the *Meridian IVR Application Development Guide* (NTP 555-9001-310), Appendix D, "Converting applications."

Transferring from 2.x using xbup

Introduction

To transfer files from Meridian IVR 2.x to ISIVR 2.2, you should use the xbup tool. The xbup tool is the backup utility provided by the mouse menu.

Before you begin

Before you use the xbup tool, you should know the following:

- Application files should not be renamed. Application files with the same name as those being restored are overwritten.
- If you use the xbup tool to back up files, you should also use it to restore the files.
- The xbup tool restores the entire tape and not just selective files.

Transfer these files

You must transfer the following Meridian IVR 2.x files:

/u/ivr/apps/*.vpf
/u/ivr/log.d/*.log
/u/ivr/exe/*.sai
/u/ivr/sys_files
/u/ivr/usr
/u/ivr/3270
/u/ivr/vt100
/u/fax/db
/u/fax/log
/u/fax/fax_data
/u/ivr/vrs/exe/lh.config

Backing up files using xbup

To transfer the files from Meridian IVR 2.x to ISIVR 2.2, you must back them up to a tape using the xbup tool.

To back up the files using the xbup tool, follow these steps.

Step	Action
1	Insert a blank tape in your Meridian IVR 2.x system.
2	Log in as **root** with a password of **root1**
3	At the # prompt, type **cd /u/ivr/tools**
4	At the # prompt, type **./xbup** ***Note:*** Be certain to type a period (.) before the "/". ***Result:*** The Backup Tool Window appears.
5	From the Backup Tool Window, select Backup.
6	To create a customized backup list, go to the *Selection* field and type **/u/ivr/backup/backup_mivr.bup** ***Result:*** A screen appears with the names of the files currently in the backup list.
7	In the Files to Add or Remove window, enter the full pathname of each of these files. Press Add after you enter each file name. /u/ivr/apps/*.vpf /u/ivr/log.d/*.log /u/ivr/exe/*.sai /u/ivr/sys_files /u/ivr/usr /u/ivr/3270 /u/ivr/vt100 /u/fax/db /u/fax/log /u/fax/fax_data /u/ivr/vrs/exe/lh.config ***Result:*** The system places the file structure in the backup list.

Step	Action
8	When finished, press OK. ***Result:*** A screen appears with the options of Backup Now, Schedule Daily Backup, or Unschedule Daily Backup.
9	Select Backup Now and press OK. ***Result:*** The system backs up the files.
10	After the backup is finished, select Quit.
11	Select Quit.
12	Remove the backup tape and label it with a name and date.

Restoring files using xbup

After the files have been backed up from the Meridian IVR 2.x system, they must be restored on the ISIVR 2.2 system.

To restore the files, follow these steps.

Step	Action
1	In the ISIVR 2.2 system, insert the tape used to back up the files in "Backing up files using xbup" on page 7-7 or "Using the xbup tool" on page 2-11.
2	At the # prompt, type **cd /u/ivr/tools**
3	Type **./xbup** ***Note:*** There is a period (.) before the slash (/). ***Result:*** The Backup Tool window appears.
4	Select Restore.
5	To complete the restore procedure, follow the steps in the *Meridian IVR System Administration Guide* (NTP 555-9001-300), Chapter 2, "File backup and restore," "Restore function" section, on page 2-12. ***Note:*** You must restore the files listed in "Transfer these files" on page 7-6.

Section B: Converting the files

In this section

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Upgrading local databases	7-15
Upgrading host template files	7-18

Overview

Introduction

This section describes how to convert applications from Meridian IVR 1.x or Meridian IVR 2.x to ISIVR 2.2.

Changes due to Y2K issues

For ISIVR 2.2 to be Y2K compliant, two changes occur during the conversion process. These changes are as follows:

- The internal Date format of all applicable cells changes to a four-digit year format. This change is only visible in the CDAT cell, where the input/output format uses a four-digit format. You cannot enter a two-digit year. For more information on the CDAT cell, refer to the *Meridian IVR Application Development Guide* (NTP 555-9001-310), Chapter 7, "Cell catalog," "CDAT - convert data" section, page 7-11.
- Application cells in ISIVR 2.2 accept and output years in a four-digit format. You must modify any host template files that accept or output dates to accept or output four-digit year formats. For more information on the template files, refer to one of the following:
  - *Meridian IVR 3270 Gateway Development Guide* (NTP 555-9001-312), Chapter 2, "Template files"
  - *Meridian IVR 5250 Gateway Development Guide* (NTP 555-9001-318), Chapter 2, "Template files"
  - *Meridian IVR VT100 Gateway Development Guide* (NTP 555-9001-316), Chapter 2, "Template files"

Converting the files for ISIVR 2.2

Introduction

This section describes how to convert the Meridian IVR 1.x or Meridian IVR 2.x application files after they are transferred to the ISIVR 2.2 system.

Before you begin

Before you begin this procedure, you should know the following:

- If you are not familiar with the application files being converted, consult your vad or the original application developer.
- The application file should be owned by the user "VAD" and the group called "group". The permission should set as "-rwxrwxrwx".

  Note: If these are incorrect, you must log in as **root** and type

  chown vad <application name>.vpf and Enter

  chgrp group <application name>.vpf and Enter

  chmod 777 <application name>.vpf and Enter
- You must use the Graphical Application Editor (XAE) to edit applications that contain a COUT cell. You must do this because the success branch of the COUT cell disappears after the conversion. For more information, refer to the *Meridian IVR Application Development Guide* (NTP 555-9001-310), Chapter 7 "Cell catalog", "COUT" section, page 7-30.
- The applications must be converted on a development system.
- To update Meridian IVR 1.x or 2.x applications, you can use appconvert.

Note: If an application is opened and saved in ISIVR 2.2, the file size may change as the internal revision number is incremented.

Converting the application files

To convert the application files, follow these steps.

Step	Action
1	Ensure that the application files have been transferred. ***Note:*** For more information, refer to Section A, "Transferring the files," on page 7-3.
2	Log in to the ISIVR 2.2 system. ***Note:*** You must log in as **vad**. Use **vad1** as the password.
3	At the UNIX prompt, type **cd/ u/ivr/apps** ***Note:*** Be certain to leave a blank space after cd/. This places you in the directory where the applications reside.
4	At the UNIX prompt, type **cp <application name>.vpf <application name>.old** ***Note:*** The <application name> is the name you assigned to the application. This step allows you to copy the application to another file in case there are problems during the conversion process.
5	Type **appconvert <application name>.vpf** ***Note:*** This activates the conversion tool.
6	Open the application in the Graphical Application Editor (XAE) to make certain all the files have been converted properly.
7	Edit any applications containing a COUT cell to ensure that the success branches are intact.
8	If the application makes use of user functions, local databases, or host template files, complete the following procedures: • "Upgrading user functions" on page 7-13 • "Upgrading local databases" on page 7-15 • "Upgrading host template files" on page 7-18

Upgrading user functions

Introduction

After the application files are migrated to ISIVR 2.2, you must upgrade the user functions.

For more information, refer to the *Meridian IVR Application Development Guide* (NTP 555-9001-310), Chapter 5, "Creating user functions."

Before you begin

Before you begin this procedure, you should know the following:

- The user function template usr.c has been enhanced between Meridian IVR 1.x and Meridian IVR 2.x. For more information, refer to the *Meridian IVR Application Development Guide* (NTP 555-9001-310), Chapter 5, "Creating user functions," "Using the usr.c file as a template," on page 5-13.
- ISIVR 2.2 uses the same usr.c functions as Meridian IVR 2.x.
- You must copy the code incorporated into the Meridian 1.x user function C source file into the new template (if you transfer a user function from Meridian 1.x).
- Minor design changes can occur when you transfer the Meridian IVR 1.x code. These changes are due to differences between the Motorola and SCO libraries. The changes depend on the actual function of the user function.

Upgrading the user function

To upgrade the user function, follow these steps.

Step	Action
1	Ensure that the SCO Development Environment is licensed. ***Note:*** For more information, refer to "Activating the SCO Development System" on page 6-11.
2	Recompile the user functions under SCO 5.0.4c.

Upgrading local databases

Introduction

This section provides the procedures to upgrade the database records from Meridian IVR 1.x or Meridian IVR 2.x to ISIVR 2.2.

For more information, refer to the *Meridian IVR Application Development Guide* (NTP 555-9001-310), Chapter 6, "Using information databases."

Upgrading local databases from 1.x to 2.2

Before you upgrade a local database from Meridian IVR 1.x to ISIVR 2.2, you must follow these steps.

Step	Action
1	From the Meridian IVR 1.x, select the database from the database editor and press Enter. ***Result:*** The database opens.
2	Press F1 to edit the template. ***Result:*** The template screen appears.
3	Press F2.
4	Select EXPORT INFO to export the records from the Meridian IVR 1.x database to a file <file_name>. ***Note:*** The file is created in the /user/ivr/gen/exe directory.
5	Transfer the file, including the data file <file_name>, to the /u/ivr/sys_files directory in the ISIVR 2.2 system. The following must be transferred as ASCII files: /user/ivr/gen/sys_files/*.tpl /user/ivr/gen/sys_files/*.dbm /user/ivr/gen/sys_files/*.ext /user/ivr/gen/sys_files/*.exch (if present) /user/ivr/gen/exe/<file_name>
6	Go to "Restoring the data" on page 7-16.

Restoring the data To restore the data on the ISIVR 2.2 system, follow these steps.

Step	Action
1	Complete "Upgrading local databases from 1.x to 2.2" on page 7-15.
2	Ensure that the appropriate permissions and ownerships are associated with the database file that was transferred from the Meridian IVR 1.x system.
3	Select the appropriate database in the database editor and press Enter. ***Result:*** The database opens and the template appears with all of its field definitions.
4	Press F1 to edit the template. ***Result:*** The template screen appears.
5	Press F2.
6	Select IMPORT INFO.
7	Specify the <file_name> and INTERNAL format to import the records. ***Note:*** No data appears immediately in the database. This is normal.
8	Save the new database.
9	Exit the editor.
10	Re-invoke the editor.
11	Open the new database. ***Note:*** The imported records should be present.

Upgrading local databases from 2.x to 2.2

The local databases are automatically upgraded from Meridian IVR 2.x to ISIVR 2.2 during the backup and restore procedures.

All you must do is ensure that the following files are backed up on the Meridian 2.x system and restored on the ISIVR 2.2 system:

- /user/ivr/gen/sys_files/*.tpl
- /user/ivr/gen/sys_files/*.dbm
- /user/ivr/gen/sys_files/*.ext
- /user/ivr/gen/sys_files/*.exch (if present)

Upgrading host template files

To make the applications Y2K compliant, you must modify any host template files to accept or output four-digit year formats.

Chapter 8

Backing up and restoring files

In this chapter

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Restoring the selected files	8-8
Performing an emergency recovery	8-9

Overview

Introduction

It is recommended that you use the ibr tool in ISIVR 2.2 to execute a backup or restore from tape.

Describing the ibr tool

The ibr tool is a new feature in ISIVR 2.2 that can be used to do the following tasks:

- a full backup
- a backup of selected files
- a full restore of all files on the backup tape

Performing a full system backup

Introduction

To back up everything on the hard drive, you must perform a full system backup. This should take about 50 minutes. The backup may take longer if you have added extra files to the hard drive.

Performing a full system backup

To execute a full system backup, follow these steps.

Step	Action
1	If required, turn on the application processor.
2	At the boot prompt, press Enter.

3	Wait for this message to appear:
	`INIT: SINGLE USER MODE`
	`Type CONTROL-d to proceed with normal startup (or give root password for system maintenance):`

4	At the password prompt, type **root1** ***Result:*** The # prompt appears.
5	Ensure that the system is in single user mode.

6	At the UNIX command line, type **ibr**
	Result: The following menu appears:
	`ISIVR 2.2 Backup and Restore Utility`
	`Make your choice:`
	`1) Full system backup`
	`2) Backup Files`
	`3) Restore Files`
	`4) Quit`
	`#?`

7	Insert a blank tape into the tape drive.

Step	Action
8	From the ISIVR 2.2 Backup and Restore Utility menu, select Full system backup. ***Note:*** The system backs up the entire hard drive to tape.
9	Remove the tape from the tape drive, label it, and store it in a safe location.
10	Reboot your system.

Backing up selected files

Introduction

Through the Backup Files option in ISIVR 2.2, you can back up specific files or all of the files. It takes about 10 Mbytes (10 000 kbytes) per minute to back up the selected files.

Recommended list of selected files

It is recommended that you back up the following list of selected files:

File name	File type
/u/ivr/apps/*.vpf	Applications
/u/ivr/log.d/*.log	Logs
/u/ivr/exe/*.sai	User functions and executables
/u/ivr/sys_files	Local databases
/u/ivr/usr	User data
/u/ivr/data	Data directory
/u/ivr/3270	3270 host software
/u/ivr/vt100	vt100 host software
/u/fax/db	Fax databases
/u/fax/logs	Fax logs
/u/fax/fax_data	Fax data
/u/ivr/vrs/exe/lh.config	Access configuration

Backing up all or selected files

To use the ibr tool to back up all or selected files, follow these steps.

Step	Action
1	If required, turn on the application processor.
2	At the boot prompt, press Enter.
3	Press Ctrl-d. ***Result:*** The time prompt appears.
4	Press Enter. ***Result:*** The SCO logo appears.
5	Log in with your login name and password.

6	At the UNIX command line, type **ibr**
	Result: The following menu appears:
	`ISIVR 2.2 Backup and Restore Utility`
	`Make your choice:`
	`1) Full system backup`
	`2) Backup Files`
	`3) Restore Files`
	`4) Quit`
	`#?`

7	Insert a blank tape into the tape drive.
8	From the ISIVR 2.2 Backup and Restore Utility menu, select Backup Files. ***Result:*** The following message appears: "`Do you wish to back up all x MB? (y/n)`"
9	If you want to back up all the files, type **y**. Go to Step 12.

Step	Action
10	If you want to back up selected files, type **n** ***Result:*** The system asks you which types of files you want to back up. ***Example:*** Do you wish to back up applications (x KB)? (y/n) Do you wish to back up user functions and executables (x KB)? (y/n)
11	Type **y** or **n** at each prompt.
12	Wait until the following message appears: `Is the tape in the drive (y/n)`
13	Type **y** ***Result:*** The backup procedure begins.
14	Remove the tape from the tape drive, label it, and store it in a safe location.

Restoring the selected files

Introduction

This section describes how to use the ibr tool to restore the application files on a tape to the system. To restore files from a tape takes about 10 Mbytes (10 000 kbytes) per minute.

Restoring from a tape

To restore the files with the ibr tool, follow these steps.

Step	Action

1	At the UNIX command line, type **ibr**
	Result: The following menu appears:
	`ISIVR 2.2 Backup and Restore Utility`
	`Make your choice:`
	`1) Full system backup`
	`2) Backup Files`
	`3) Restore Files`
	`4) Quit`
	`#?`

2	Insert the tape to be restored into the tape drive.
3	From the ISIVR 2.2 Backup and Restore Utility menu, select Restore Files. ***Result:*** The following message appears: "`Preparing to perform File restore. This procedure will restore all files contained on the tape and overwrite any existing files. Are you sure you want to restore this tape? (y/n)`
4	Type **y**

Performing an emergency recovery

Introduction

This section describes how to restore a full system backup on your ISIVR 2.2 system in the unlikely event that your system becomes corrupted.

This recovery procedure can take about 40 minutes to complete. The time may be longer, however, if you have added extra files to the hard drive.

Restoring from a tape

To restore the files with the ibr tool, follow these steps.

Step	Action
1	If the system is on, go to the # prompt and type **shutdown -y -g0**

2	Wait for this message to appear:
	`** Safe to Power Off **`
	`- or -`
	`** Press Any Key to Reboot **`

3	Turn the system off.
4	Insert the disk labeled "Symposium Integrated IVR 2.2 Boot Diskette 1/1 - CD Installation/Tape Recovery."
5	Power up the system.
6	Wait for the boot prompt to appear.
7	Insert your backup tape.
8	Insert the CD-ROM labeled "Symposium Integrated IVR 2.2 OS & Application CD 1/1."
9	At the boot prompt, press Enter. ***Result:*** The kernel information is loaded.
10	Wait until the system prompts you to enter the root disk.

Step	Action
11	Remove the disk labeled "Symposium Integrated IVR 2.2 Boot Diskette 1/1 - CD Installation/Tape Recovery."
12	Insert the disk labeled "Symposium Integrated IVR 2.2 Root Diskette 1/1 - CD Installation/Tape Recovery."
13	Press Enter.

14	Wait for this menu to appear:
	`ISIVR 2.2 Installation`
	`Choose your installation media type:`
	`1) CDROM`
	`2) Tape Drive`
	`3) Quit`
	`#?`

15	Type **2** to select tape. ***Result:*** The files on the tape replace the files on the hard drive.
16	After the files have been restored, remove the Symposium Integrated IVR 2.2 Root Diskette 1/1 - CD Installation Tape/ Recovery from the floppy drive.
17	Remove your backup tape.
18	Press Enter to reboot the system.
19	Wait as the system reboots. ***Note:*** The following error message may appear: `Error. Incorrect SCO ISAM Runtime System installed.`
20	If the error message appears, log in as **root** and type **isverify -I** ***Note:*** The "I" is a capital "i". ***Result:*** The system continues to reboot.

Chapter 9

Performing card diagnostics

In this chapter

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Overview

Introduction

This chapter describes how to perform diagnostic tests to verify that your LAN and serial cards are working properly.

Displaying the Diagnostic Utilities menu

Introduction

To diagnose the performance of a card, you begin by displaying the ISIVR 2.2 Diagnostic Utilities menu.

Displaying the Diagnostic Utilities menu

To display the ISIVR 2.2 Diagnostic Utilities menu, follow these steps.

Step	Action
1	Insert your MS-DOS disk (Version 6.22 or higher).
2	Boot your ISIVR 2.2 system.
3	At the # prompt, type **A:\> c:**

4	At the C:\> prompt, type **diag**
	Result: The following screen appears:
	`----------`
	`ISIVR 2.2 Diagnostic Utilities`
	`----------`
	`Press 1 for PC Diags`
	`Press 2 for 3COM`
	`Press 3 for Znyx`
	`Press 4 for Madge`
	`Press 5 for PC/Xe`
	`Press 6 for PC/Xem`
	`Press 7 for Sync570`
	`Press q to exit this program`
	`Enter your choice [1,2,3,4,5,6,7,Q]?`

Diagnosing the 3COM card

Introduction

This section describes how to perform a diagnostic on the 3COM Ethernet card.

Diagnosing the 3COM card

To perform a diagnostic on the 3COM Ethernet card, follow these steps.

Step	Action
1	Display the ISIVR 2.2 Diagnostic Utilities menu. ***Note:*** For more information, refer to "Displaying the Diagnostic Utilities menu" on page 9-3.
2	Press 2. ***Result:*** The 3C90XCFG program starts.
3	Select Test. ***Result:*** The Test menu appears.
4	Select Run Tests.
5	Press Enter to select Start. ***Result:*** The test results are displayed as passed or failed. Error messages are displayed for failed tests. When all tests are successfully completed, the following message appears: "`Completed Successfully.`"
6	When finished, press Enter to select Cancel.
7	Select the Quit menu and select Exit.

Diagnosing the ZNYX Ethernet card

Introduction

This section describes how to perform a diagnostic on the ZNYX Ethernet card.

Diagnosing the ZNYX card

To perform a diagnostic on the ZNYX Ethernet card, follow these steps.

Step	Action
1	Display the ISIVR 2.2 Diagnostic Utilities menu. ***Note:*** For more information, refer to "Displaying the Diagnostic Utilities menu" on page 9-3.
2	Press 3. ***Result:*** The DIAG312 program starts. When the test finishes, the following message appears: "`Diagnostic successfully completed.`"

Diagnosing the Madge Token Ring card

Introduction

This section describes how to perform a diagnostic on the Madge Token Ring card.

Dip switch settings

This table shows the dip switch settings for the Madge Token Ring card.

S1	S2	S3	S4	Notes	IRQ	Mem Address	IO Port Address	DMA
ON	OFF	OFF	OFF	For LAN (4 Mbps)	10	DC000	1a20	6
ON	OFF	OFF	ON	For LAN (16 Mbps)	10	DC000	1a20	6
ON	ON	OFF	ON	For Host	15	DE000	3a20	5

Diagnosing the Madge Token Ring card

To perform a diagnostic on the Madge Token Ring card, follow these steps.

Step	Action
1	Connect a Multistation Access Unit (MAU) to the Madge Token Ring card.
2	Verify that the dip switches are set properly. ***Note:*** For more information, refer to "Dip switch settings" on page 9-6.
3	Display the ISIVR 2.2 Diagnostic Utilities menu. ***Note:*** For more information, refer to "Displaying the Diagnostic Utilities menu" on page 9-3.

Step	Action
4	Press 4. ***Result:*** The MWIZARD program starts.
5	Select Install a new Ringnode. ***Result:*** If the configuration in the card's non-volatile memory differs from the current dip switch settings, a screen appears with the following options: • configure as existing • configure as switches
6	Select configure as switches. ***Result:*** This selection overrides the current settings in the non-volatile memory.
7	Select Program and OK.
8	For the Ringnode's ring speed, select 16 Mbps or 4 Mbps.
9	Select Program.
10	If the operation completes without a warning, select OK. If a warning message appears, select Continue. ***Result:*** A screen appears for you to modify the state of the remote booting feature.
11	If the SmartRom is turned off, select Skip. If the SmartRom is turned on, select Program. ***Result:*** A screen appears for you to perform a diagnostic on the Ringnode.
12	Select OK. ***Result:*** If the test result succeeds, the following message appears: "Quick Test successful, but reported that the Ringnode opened as a single station on the ring. Check your cable connection."
13	Select OK.
14	In the main Madge Wizard Menu, select Exit.

Diagnosing the PC/Xe card

Introduction

This section describes how to perform a diagnostic on the 8-port Digiboard PC/Xe serial port card.

Diagnosing the PC/Xe card

To perform a diagnostic on the PC/Xe card, follow these steps.

Step	Action
1	Display the ISIVR 2.2 Diagnostic Utilities menu. ***Note:*** For more information, refer to "Displaying the Diagnostic Utilities menu" on page 9-3.
2	Press 5. ***Result:*** The UD-CISC program starts.
3	Press any key to continue.
4	Press F to select the product family of the adapter.
5	Press A to select PC/Xe adapter.
6	Press A to change the Adapter I/O address.
7	If testing the first (or only) PC/Xe card, press F to select address 300. If testing the second PC/Xe card, press G to select address 320.
8	Press M to change the memory address.
9	Press D to select D0000H.
10	Press 0 to select 0000H.
11	Press P to set Port Number.
12	Press B to select all ports.
13	Press C to change continuous test parameter.
14	Press N to select No.

Step	Action
15	Press R to run the tests. ***Result:*** The test results are displayed as passed or failed. Error messages are displayed for failed tests. When all tests are completed, the following message appears: "`Diagnostic completed.`"
16	Press Escape to exit.

Diagnosing the PC/Xem card

Introduction

This section describes how to perform a diagnostic on the 16-port Digiboard PC/Xem serial port card.

Diagnosing the PC/Xem card

To perform a diagnostic on the PC/Xem card, follow these steps.

Step	Action
1	Connect the PC/Xem Ports module to the PC/Xem card.
2	Display the ISIVR 2.2 Diagnostic Utilities menu. ***Note:*** For more information, refer to "Displaying the Diagnostic Utilities menu" on page 9-3.
3	Press 6. ***Result:*** The UD-RISC program starts.
4	Press any key to continue.
5	Press F to select the product family of the adapter.
6	Press A to select Xem (ISA) adapter.
7	Press A to change the Adapter I/O address.
8	Press F to select address 304.
9	Press M to change the memory address.
10	Press H to select D0000.
11	Press P to set Port Number.
12	Press B to select all ports.
13	Press C to set Iteration.
14	Press N to select No.

Step	Action
15	Press R to run the tests. ***Result:*** The test results are displayed as passed or failed. Error messages are displayed for failed tests. When all tests are completed, the following message appears: "`Diagnostic completed.`"
16	Press Escape to exit.

Diagnosing the Arnet SYNC/570 card

Introduction

This section describes how to perform a diagnostic on the Arnet SYNC/570 card.

Arnet card settings

This table shows the settings for the Arnet SYNC/570 card.

IRQ	Memory Address	I/O Port Address	S1	S2	S3	S4	S5	S6
15	E0000	340	ON	ON	OFF	ON	OFF	OFF

Diagnosing the Arnet SYNC/570 card

To perform a diagnostic on the Arnet SYNC/570 card, follow these steps.

Step	Action
1	Display the ISIVR 2.2 Diagnostic Utilities menu. ***Note:*** For more information, refer to "Displaying the Diagnostic Utilities menu" on page 9-3.
2	Press 7. ***Result:*** The SYNC570 program starts.
3	Press 1 to change the RAM address. ***Result:*** The program displays a field similar to *Enter New Address: 000000.*
4	Type **E0000** ***Note:*** If necessary, press the backspace key to remove the last zero.
5	Press 2 to set the IRQ.
6	Press 7 to select IRQ 15.

Step	Action
7	Press Enter. ***Result:*** The following message appears: "Place loopback plug on port 1."
8	Install the single channel loopback connector on line 1 and press Enter. ***Result:*** The following message appears: "Place loopback plug on port 2."
9	Install the single channel loopback connector on line 2 and press Enter. ***Result:*** If the test is successful, the following message appears: "Adapter Passed." If the test fails, the following message appears: "Adapter Failed."

Diagnosing the Dialogic VFX/40E card

Introduction

This section describes how to perform a diagnostic on the Dialogic VFX/40E card.

Diagnosing the Dialogic VFX/40E card

To perform a diagnostic on the Dialogic VFX/40E card, follow these steps.

Step	Action
1	Stop and unload all IVR applications.
2	Log in to the UNIX console as **root**
3	Run UDD by typing **/usr/dialogic/bin/udd** ***Result:*** The system displays a warning message.
4	Press Y to continue.
5	Wait for diagnostic to be loaded on to the boards. ***Result:*** The system displays a list of boards currently available. All VFX/40E boards appear as D41-ESC boards.
6	Press the spacebar to select a board.
7	Press Tab followed by Enter to select all tests.
8	Select OK.
9	Select Run Tests. ***Result:*** The following message appears: "`Tests Completed: no errors found.`"

Chapter 10

Using the Uninterruptible Power Supply option

In this chapter

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Overview

Introduction

The Uninterruptible Power Supply (UPS) option prevents spikes, blackouts, sags, and surges from affecting the normal operation of the ISIVR 2.2.

The UPS option filters out small utility line fluctuations and isolates the servers from large disturbances. It does this by internally disconnecting the server from your facility's power line. It then continues to supply power from its internal batteries until the utility power returns to normal.

Connecting the UPS

Introduction

This section describes how to connect the UPS.

Hardware requirements

To connect the UPS, you require the following hardware:

- UPS - American Power Conversion (APC) Smart UPS 1000
- 9-pin male to 9-pin female black-colored UPS communication cable
- 9-pin male to 25-pin male black-colored fan-out connector
- 25-pin male to 25-pin female gender changer

Checking the UPS option connection

To ensure that the UPS option is enabled on your system, follow these steps.

Step	Action
1	At the # prompt, type **kccheck** ***Result:*** The option list appears. If the UPS option is enabled, the Smart UPS option will be set to "yes."
2	If the Smart UPS option is not set to "yes," contact your Nortel Networks representative.

Connecting the UPS

To connect the UPS option, follow these steps.

Step	Action
1	At the # prompt, power down the ISIVR 2.2 system by typing **shutdown -g0 -y**
2	When you are prompted to shut down the system, push the power button at the front of the application processor.

Step	Action
3	Connect the black-colored UPS communication cable, black-colored fan-out connector, and the gender charger together. ***Note:*** For more information on the APC Smart-UPS, refer to the APC Smart-UPS documentation supplied with your UPS.
4	If you have a PC/Xe serial board, connect the 25-pin female end of the gender changer to connector P7 of the Octa-cable. If you have a PC/Xem serial board, connect the 25-pin female end of the gender changer to connector 7 of the PORTS/16EM module.
5	Connect the 9-pin male end of the black-colored cable to the 9-pin communication port on the back of the UPS.
6	Attach the ISIVR 2.2 power cable to one of the receptacles on the back of the UPS.
7	Plug the UPS power cable into an isolated grounding receptacle. ***Note:*** If the application processor turns on, turn it off.
8	Turn on the UPS by pressing the front panel switch for one second. ***Note:*** The front panel switch is labeled with a "|". ***Result:*** The UPS beeps and the On Line indicator begins to flash. In about 10 seconds, the UPS simulates a power outage and switches to the On Battery operation. This is the self-test feature that ensures the UPS is working properly and the battery does not require replacing. The test lasts about 10 seconds and completes when the On Line light stops flashing.
9	Check that the Sit Wiring Fault Light is not lit. ***Note:*** If it is lit, notify the site to check the outlet for incorrect grounding.
10	Turn on the monitor and application processor.
11	Go to "Running Powerchute" on page 10-5.

Running Powerchute

Introduction

Powerchute is a software application that allows you to monitor the communication between the UPS and the ISIVR 2.2. It is included with your ISIVR 2.2 software package.

Powerchute displays the system name of the protected machine, status of the UPS self-test, date of the last test date, UPS voltage, temperature, and frequency. It also indicates whether the UPS and the ISIVR 2.2 are communicating.

Activating Powerchute

To ensure that the UPS option is enabled on your system, follow these steps.

Step	Action
1	Log in to the ISIVR 2.2 system as **root** ***Note:*** If you did not log in as root, type **su** in the xterm shell. Then, enter the root password.
2	Go to the /usr/lib/powerchute directory.
3	To start Powerchute in graphic mode, type **./xpowerchute** ***Note:*** To start Powerchute remotely, type **./powerchute** ***Result:*** The Powerchute screen appears.
4	Select the isivr22 server to monitor and click OK.
5	Click OK without entering a password.
6	On the left side of the Powerchute screen, check the *Status as On Line*. ***Note:*** The *Status as On Line* ensures that the UPS and ISIVR 2.2 are communicating.
7	If the UPS and ISIVR 2.2 do not appear to be communicating, go to "Troubleshooting the UPS" on page 10-6.

Troubleshooting the UPS

Introduction

This section describes three tests you can run to determine whether the UPS and ISIVR 2.2 are communicating.

Test 1: Simulating a short power failure

This test simulates a short power failure on the system. The failure lasts about one second. To run this test, follow these steps.

Step	Action
1	From the Powerchute screen, select the Diagnostic menu.
2	From the Diagnostics menu, select Simulate Power Failure.
3	Observe that the On Battery Indicator light goes yellow and turns off. ***Result:*** A message appears at the bottom of the screen stating the following: `UPS on battery: Simulated Power Failure. Normal power restored: UPS on line.`
4	Wait until the system returns to normal operation.

Test 2: Simulating a power system failure

This test simulates a power system blackout that lasts up to 10 seconds. To run this test, follow these steps.

Step	Action
1	From the Powerchute screen, select the Diagnostic menu.
2	From the Diagnostic menu, select Initiate UPS Self Test.
3	Observe that the On Line Indicator light flashes and the On Battery light goes on.

Step	Action
4	After about 10 seconds, observe that the On Line light stops flashing and returns to a solid green color. ***Result:*** A message appears at the bottom of the screen stating: `UPS initiated self test passed.`
5	Wait until the system returns to normal operation.

Test 3: Simulating a power system failure

This test simulates a power system failure and an ISIVR 2.2 shutdown that lasts more than one hour. To run this test, follow these steps.

Step	Action
1	From the Powerchute screen, select the Configuration menu.
2	From the Configuration menu, select Event Actions.
3	In the Events table, select the Low Battery Condition event.
4	To set the shutdown time, press the Options button beside the Shut Down Server option.
5	Note the time, in seconds, that has been set for this system to shut down when the UPS nears a low battery condition. ***Note:*** Typically, this setting is between 30 to 300 seconds.
6	Exit from Powerchute.
7	To simulate a complete power failure, pull the UPS AC plug. ***Result:*** The On Line light turns off and the On Battery light turns on.
8	Wait as every 30 seconds the UPS beeps four times and displays the following warning message: `"System name" running on battery power. "System name" will shut down in "x" minutes.` ***Note:*** The "x" represents the estimated time before the UPS reaches a low battery condition.

Step	Action
9	Wait as the UPS Low Battery condition (less than 20 percent battery capacity) is reached and the UPS beeps constantly.
10	Wait as the application processor begins to execute the graceful shutdown script.
11	Wait until the following message appears: `Safe to Power Off` ***Note:*** When the UPS battery is drained, it cuts out and the application processor turns off.
12	To simulate the return of power, reconnect the UPS AC plug. ***Result:*** The application processor begins its startup scripts. The UPS begins to charge the battery back to capacity.

Chapter 11

Miscellaneous information

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Overview

Introduction

This chapter describes modifications that have been made to the Meridian IVR 2.0/I documentation since it was last published. It also describes miscellaneous information about ISIVR 2.2.

List of topics

The following list identifies the topics that are discussed in this chapter:

- 3270/5250 SNA/SDLC card
- Calls hang at DCAT cell
- Configuring the Madge Token Ring adapter
- Connecting and configuring the UPS option
- Configuring multiple channels over two or more access links
- Detecting hangup calls
- ISIVR 2.2 information message

3270/5250 SNA/SDLC card

Introduction

The documentation for the Arnet SYNC/570 card's pin assignments and switch settings has been modified.

These modifications apply to the material documented in the *Meridian IVR 3270 Gateway Development Guide* (NTP 555-9001-312), and the *Meridian IVR 5250 Gateway Development Guide* (NTP 555-9001-318), Appendix B, "Host connectivity" chapter, "3270/5250 SNA/SDLC card" section, on page B-2.

Pin assignments

The Arnet SYNC/570 has two high-density 15-pin D-subminiature female port connectors. The connectors provide an EIA 232D interface and serial data transmission and reception.

Your application may specify the cable configuration required to connect the modems to a computer. If so, you should follow your application's recommendations. If cable configurations are not specified, you can use the cable types shown in these tables.

Arnet SYNC/570 DB-15 connector pin assignments

Cables for use with synchronous modems need a minimum of 11 wires plus a shield. The DB-15 connectors are compatible with EIA-232-D devices.

This table shows the pin assignments for the DB-15 connectors on the SYNC/570 card.

Pin Number	Signal	Input/Output
1	Not connected	
2	Transmitted Data (TXD)	Output
3	Received Data (RXD)	Input

Pin Number	Signal	Input/Output
4	Request to Send (RTS)	Output
5	Clear to Send (CTS)	Input
6	Data Set Ready (DSR)	Input
7	Signal Ground	
8	Data Carrier Detect (DCD)	Input
12	Receive Clock (RXC)	Input
13	Transmit Clock (TXC)	Output
14	Transmit Clock (TXC)	Input
15	Data Terminal Ready (DTR)	Output
Shell	CGND	

Cable D-25 male connector pin assignments

The cables included in the Arnet SYNC/570 package have a DB-15 male connector on the board end, and a DB-25 male connector on the peripheral end.

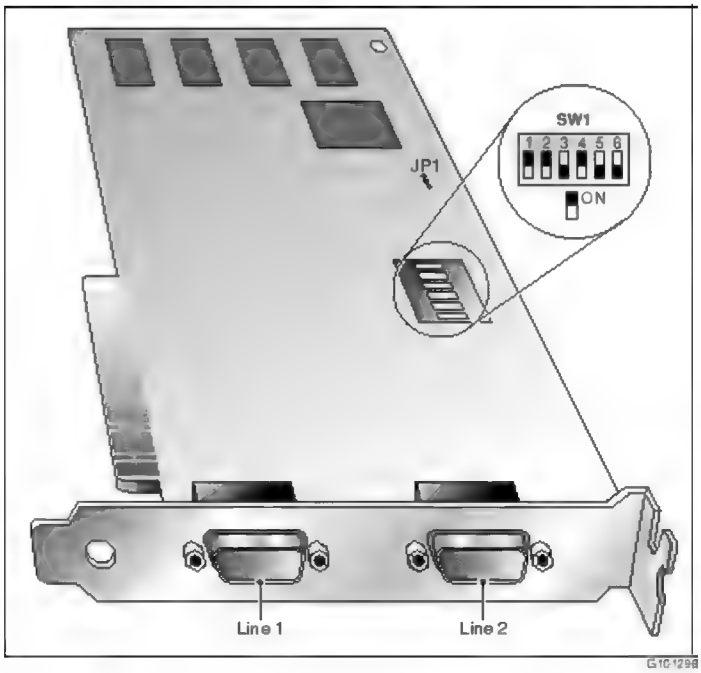
This table shows the pin assignments for the DB-25 connector.

Pin Number	Signal	Input/Output
1	Not connected	
2	Transmitted Data (TXD)	Output
3	Received Data (RXD)	Input
4	Request to Send (RTS)	Output
5	Clear to Send (CTS)	Input
6	Data Set Ready (DSR)	Input
7	Signal Ground	

Pin Number	Signal	Input/Output
8	Data Carrier Detect (DCD)	Input
17	Receive Clock (RXC)	Input
24	Transmit Clock (TXC)	Output
15	Transmit Clock (TXC)	Input
20	Data Terminal Ready (DTR)	Output
Shell	CGND	

Arnet SDLC card

This diagram shows the switch settings for an I/O port address of 340 on the Arnet SDLC card. The settings have been changed from those displayed in the Meridian IVR 2.0/I documentation.



Calls hang at DCAT cell

Introduction

This section describes the corrective action to take if calls hang at the Data File Create/Concatenate (DCAT) cell.

For more information on the DCAT cell, refer to the *Meridian IVR Fax Application Guide* (NTP 555-9001-350), Chapter 4, "Developing a fax application," "DCAT - Data Concatenation" section, on page 4-23.

Describing the problem

The DCAT concatenates files into a target file. If a source file does not exist, the call hangs at the DCAT cell instead of taking the error branch. Any future calls using DCAT become stuck even if the source file exists.

Describing the solution

It is recommended that you create a user function and place it before the DCAT cell. The new user function checks for the existence of the source files. If the source files do not exist, the user function goes to the error cell. If the source files exist, the application continues to the DCAT cell.

Configuring the Madge Token Ring adapter

Introduction

This section provides additional switch setting information for the Madge Token Ring adapter.

For more information about the Madge Token Ring adapter, refer to the *Meridian IVR Installation Guide* (NTP 555-9001-210), Chapter 2, "Installation," "Configuring the Madge Token Ring adapter" section, on page 2-45.

Settings for the Madge Token Ring

This table shows the interrupt/memory addresses, I/O port address, and the switch settings for the Madge Token Ring adapter. The settings for Switch 3 and Switch 4 were not provided in previous documentation.

Note: If you are connecting the Ringnode to a 16 Mbps network, the switch SW4 is set to ON. If you are connecting the Ringnode to a 4 Mbps network, the switch SW4 is set to OFF.

IRQ	Mem Address	I/O Port Address	DMA Channel	SW 1	SW 2	SW 3	SW 4	Note
10	DC000	1a20	6	ON	OFF	OFF	ON	LAN
15	DE000	3a20	5	ON	ON	OFF	ON	Host

Configuring multiple ACCESS links

Introduction

This section provides additional information on how to configure multiple channels over two or more ACCESS links.

For more information on the ACCESS links, refer to the *Meridian IVR Installation Guide* (NTP 555-9001-210), Chapter 3, "Configuring Meridian IVR for testing," "Configuring the ACCESS links" section, on page 3-8.

Configuring the links

To work properly, the multiple access links must be specifically configured with the IVR channels. The channels must also be configured to an access link in sequential blocks.

For example, consider a Meridian IVR 2.x system with 48 channels and two access links. Link 1 must be configured with channels 0–23 and Link 2 must be configured with channels 24–47. The first sequential block must always be set for Link 1.

If a system is not configured using sequential blocks, you will encounter problems.

Detecting hangup calls

Introduction

This section describes how to handle caller hangups that occur

- during or before any other telephony cells that interact with the caller
- after the telephony cell begins

Describing the problem

Meridian IVR is designed to detect caller hangup only at the start of the telephony cells such as GDAT, PLAY, PDAT, MENU, and so on.

If a caller hangs up during or before any other cell, or even after the telephony cell begins, there is no guarantee that the hangup will be passed to the IVR call flow until the next telephony cell.

Describing the solution

It is recommended that you place a telephone cell with a short duration (0.2 seconds of silence PLAY cell) ahead of the potentially time-extensive cells. The time-extensive cells can provide user functions, database access, or host communications.

For more information on how to develop cells, refer to the *Meridian IVR Fax Application Guide* (NTP 555-9001-350).

ISIVR 2.2 information message

Introduction

When an ISIVR 2.2 system is booting up, the following message may be displayed:

```
8004: PCI ROM not found, May be OK for this card Bus
0 Device 0D, Function 0
```

Describing the message

This is an informational message that you cannot suppress. It does not indicate an error and requires no intervention.

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